













AN  
INTRODUCTION TO  
**MODERN ECONOMICS**

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## PREFACE

The present book is intended to be a text-book on economic theory for the students of the Degree Classes of the Indian Universities. In the writing of this book my endeavour throughout has been to discuss the accepted principles of economic doctrines in simple language and lucid style to evoke the interest of the students and to help them in understanding these doctrines properly. I have tried to incorporate, as far as possible, the latest developments in the different branches of economic theory and to make the book comprehensive. I, however, do not claim any originality of research nor do I claim any originality for my treatment. In the preparation of the book I have depended on the works and writings of celebrated English, American and Continental authors. I shall, however, be glad to receive suggestions, especially from teachers, for further improvements to be made in the book, if there is another edition.

My wife has helped me considerably in the preparation of this book and I have no hesitation in saying that but for her unfailing patience and active encouragement the book might not have been written at all.

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P. K. GHOSH.



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# **BOOK I**

## **CHAPTER 1**

### **INTRODUCTION**

No one in this world has everything he wants. Each one of us, therefore, is busy procuring what we want by giving what we can. Look around you and pick up any man either in the street or in the factory, firm or office, and you can verify the truth of this statement. The problems of hunger and privation in the society, for the economist, are just the problems of administration of scarce resources to the needs of the society. "Economics," therefore, "is a social science studying how people attempt to accommodate scarcity to their wants and how these attempts interact through exchange".<sup>1</sup>

Earlier thinkers, for instance, Carlyle and Ruskin, who condemned the science as the Gospel of Mammonism or Dismal science and as the science of selfish pursuit of wealth, were, therefore, hardly justified. The plain fact is that there would not be any need to worship Mammon or to be selfish in obtaining articles one needs if things were available in plenty and without any efforts. And, then there would not be any need for such a science as Economics either. But the growing popularity and the increasing interest shown in the subject are sure indications of its importance in to-day's community life. And the fundamental problem in the life of a modern community, we need hardly stress, is the problem of 'Scarcity and Choice'.

Selfish pursuit of wealth or worshipping Mammon are not, therefore, the aims of Economics. "The starting point and the goal of our science", rightly observes Roscher, the founder of the modern historical school of economists, "is man". "Political economy or Economics" says Marshall, "is a study of man's actions in the ordinary business of life ; it inquires how he gets

<sup>1</sup> Cairncross : Introduction to Economics, p. 8.

his income and how he uses it. It follows the action of individuals and of nations as they seek, by separate or collective endeavour, to increase the material means of their well-being and to turn their resources to the best account. Thus, it is, on the one side, a study of wealth and, on the other, and more important side, a part of the study of man".<sup>1</sup>

**Economics and Material Welfare :** Opinion on any problem of Economics is necessarily an 'amalgam of science, philosophy and practical wisdom.' Hence, there is sufficient room for disagreement amongst thinkers.

Writing in his *Modern Utopia*, observes Mr. H. G. Wells, "from its beginning the earthly study of Economics has been infertile and unhelpful because of the mass of unanalysed and scarcely suspected assumptions upon which it rested. The facts were ignored that trade is a by-product and not an essential factor in social life, that property is a plastic and fluctuating convention, that value is capable of impersonal treatment only in the case of the most generalised requirements. Wealth was measured by the standard of exchange. Society was regarded as a practically unlimited number of avaricious adult units incapable of any other subordinate groupings, than business partnerships, and the sources of competition were assumed to be inexhaustible. Our liberation from these false presumptions through the rhetoric of Carlyle and Ruskin and the activities of the socialists is more apparent than real."

No wonder, therefore, that even to-day the bewildered common man asks : Is, then, Economics really a Science of the selfish pursuit of wealth ? Does economics study only the causes of material welfare ?

Description of the science as 'an enquiry into the nature and causes of wealth of nations' or as the 'Science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man,' evidently has contributed to the confusion of the lay man.

<sup>1</sup> Marshall—*Economics of Industry*, Book I, Ch. I, p. 1.

The task of the Economist is to ensure wise, that is, the most judicious and profitable use of the scarce resources with a view to augment human well-being. Such use of the scarce resources just implies certain activities—economic activities—undertaken to promote welfare. Economics, thus, is simply a “study of human behaviour.” And it is, therefore, a gross error to condemn the science as the selfish pursuit of wealth. Instead, the chief purpose of economics is, as says Prof. Fisher, “to set forth the relations of wealth to human life and welfare.” “The immediate object of Economic action”, observes Prof. Clay in his *Economics for the General Reader*, “is wealth, but the ultimate object is welfare, to which wealth is a means.” Evidently, again, when Cannan said that Economics ‘deals with the causes of the material welfare or wealth of human beings’ he just meant by wealth the ‘scarce resources’ brought into use for satisfying human wants, which, in other words, means, for increasing human welfare.

The concept of welfare, however, is a very broad one. It should for instance, imply physical, mental as well as moral welfare. What, then, it may be asked, do we mean by material welfare? “The range of our inquiry becomes restricted to that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money. This part of welfare may be called...economic welfare. Economic welfare is the subject matter of economic science.”<sup>1</sup> Prof. Robbins, however, disagrees with this view. “Is it not misleading”, asks he, “to go on describing Economics as the study of the causes of material welfare? The services of the opera dancer are wealth. Economics deals with the pricing of these services equally with the pricing of the services of a cook. Whatever Economics is concerned with, it is not concerned with the causes of material welfare as such.” Robbins would, therefore, define Economics as the science, “which studies human behaviour as a

<sup>1</sup> Pigou—*Economics of Welfare*.

relationship between ends and scarce means which have alternate uses".<sup>1</sup>

**Conclusion :** Innumerable competing wants, more often unfulfilled than not, and scarcity of the material resources with which to satisfy them are then the problems before the Economist. "Economics", rightly says Cairncross, "is the study of the influence of scarcity on human conduct in circumstances where men have freedom of choice in allocating scarce resources between competing wants."<sup>2</sup> It just studies how people attempt to "accommodate scarcity to their wants and how these attempts interact through exchange".

The task of the economist, as we have mentioned above, is to ensure the best, that is, the most advantageous use of the scarce resources to maximise human welfare. The science of economics is, therefore, not a mere 'technique of reasoning' ; it is more than that. It is not studied for the sake of knowledge as such. We study Economics to 'obtain guidance in the practical conduct of life and specially of social life'.<sup>3</sup> And it is the 'promise of fruit' and not 'of light' that enthuses the student to study economics. For, economics is a 'study of mankind in the ordinary business of life' and, "it is not in the ordinary business of life that mankind is most interesting or inspiring. One who desired knowledge of man apart from fruits of knowledge would seek it in the history of religious enthusiasm, of martyrdom or of love ; he would not seek it in the market place. When we elect to watch the play of human motives that are ordinary—that are sometimes mean and dismal and ignoble—our impulse is not the philosopher's impulse, knowledge for the sake of knowledge, but rather the physiologist's knowledge for the healing that knowledge may help to bring".<sup>4</sup>

**Can we regard Economics as a Science ?** Physics, we

<sup>1</sup> The Nature and Significance of Economic Science : Ch. I.

<sup>2</sup> Introduction to Economics, p. 7.

<sup>3</sup> Marshall—Principles, Book I.

<sup>4</sup> Pigou—Welfare, Ch. I.

know, deals with facts as they are and hence it is regarded as a Positive Science. Ethics, on the other hand, is concerned with 'what ought to be' from the moral standpoint and therefore it is known as a Normative Science. With what Economics is concerned? As we know, Economics is simply 'a study of men as they live and move and think in the ordinary business of life.' Should we, then, regard Economics as a Science or not?

Political Economy, to Aristotle the Greek Philosopher, was an art of providing a revenue for the State. For years following, in Europe at least, the idea worked that political economy was an art of making a people wealthy and powerful. Now-a-days, however, economics is studied as a Social Science and hence, more emphasis is laid by modern thinkers on the scientific nature of the subject. The arguments in support of the modern view are the following.

Like any other science the science of economics is also a systematized body of knowledge dealing with 'man's actions in society in relation to wealth.' How can, it may be reasonably asked, economics as a science afford to generalise? For, behind actions men have motives. And is it possible to measure human motives?

Of course, human motives are very complex. But it should be remembered that we are concerned with the study of 'real men' and not of 'fictitious men' or 'economic men.' Moreover, economics "concerns itself chiefly with those motives which affect, most powerfully and most steadily, man's conduct in the business part of his life."<sup>1</sup> And the 'steadiest motive to business work is the desire for the pay which is the material reward of work.'<sup>2</sup> It is, of course, possible that some men may be influenced by their 'personal affections' and others by their 'conceptions of duty' and reverence for 'high ideals'. But even as free agents, men, we can safely generalise, act as rational beings and under similar circumstances they normally act in simi-

<sup>1</sup> Marshall—Economics of Industry, p. 19.

<sup>2</sup> *Ibid* 19.

lar ways. "The uniformity in reason implies some uniformity in human affairs, *i.e.*, law in human affairs." And as in the cases of the physical sciences, these laws, normally speaking, hold good.

Granting even that men acting from similar motive, are likely to act in similar way, can we claim that economics as a Science is as exact as any other positive science? 'The motive', says Marshall, 'is supplied by a definite amount of £ s. d., and it is this definite and exact money measurement of the steadiest motives in business life, which has enabled economics far to outrun every other branch of the study of man. Just as the chemist's fine balance has made chemistry more exact than most other physical sciences, so this economist's balance, rough and imperfect as it is, has made economics more exact than any other branch of social science.'<sup>1</sup> "But of course," adds Marshall, "economics cannot be compared with the exact physical sciences; for it deals with the ever-changing and subtle forces of human nature."<sup>2</sup>

Critics, may however, point out that subsequent events may belie such generalizations in economics. Granted, that since economics deals with such a complex phenomenon as man, a free agent and his 'motive', economic laws are less exact and sometimes any prediction may not come true. But this may be the case with the physical sciences too. For instance, the laws of Chemistry tell us that the combination of atoms of oxygen and hydrogen will form water. But this is so only under certain conditions of atmosphere *i.e.*, of temperature and pressure. If these conditions are absent, then the combination may not form water. In the same way, if there be no counteracting factor, then the predictions in economics also are likely to come true.

The claim of economics to be regarded as a science then is rightly justified, firstly, because the economists 'deal with facts which can be observed, and quantities which can be measured and recorded; so that when differences of opinion arise

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<sup>1</sup> *Ibid* 19.

<sup>2</sup> *Ibid* 19.

with regard to them, the differences can be brought to test of public and well established records ; and thus science obtains a solid basis on which to work. In the second place, the problems, which are grouped as economic, because they relate specially to man's conduct under the influence of motives that are measurable by a money price, are found to make a fairly homogeneous group'.<sup>1</sup>

It may be, however, of some interest to give the view of Prof. Pigou in this connection. According to him, economics is a science and not an art, but it is the type of science adapted to form the basis of an art. The 'type of science', observes he, "that the economist will endeavour to develop must be one adapted to form the basis of an art. It will not, indeed, itself be an art, or directly enunciate precepts of government. It is a positive science of what is and tends to be, not a normative science of what ought to be...there are two main types of positive science. On the one side are the sciences of Formal Logic and Pure Mathematics, whose function is to discover implications. On the other side are the realistic sciences, such as physics, chemistry, and biology, which are concerned with actualities—it must be the realistic, and not the pure type of science that constitutes the object of our research. We shall endeavour to elucidate not any generalised system of possible worlds, but the actual world of men and women as they are found in experience to be."<sup>2</sup>

**Economic Laws :** Laws, as we know, may be Customary, Statutory, Moral or Religious. It is obligatory to obey these laws since these are in the nature of commands. Not so, however, are the laws of Natural Sciences. They are just relation between cause and effect. That is, they imply that a definite result will follow from a definite cause. Every cause has a tendency to produce some definite result, if however, nothing occurs meanwhile to hinder it.

<sup>1</sup> Marshall—Principles, Bk. I, Ch. I.

<sup>2</sup> Pigou—Welfare.



In Physics, the law of gravitation, for instance, states how two things, in the absence of any counteracting cause, move towards one another at a particular ratio. And with the help of this law, it is possible on the part of Astronomers to predict much in advance, the exact time of occurrence of eclipses, lunar or solar.

Can the laws of Economics be said to be as exact as the laws of Natural Sciences? Of course, not, and for the obvious reason that they deal with such complex phenomena as 'human motives' which cannot be observed. Naturally, accurate generalisation is impossible. Laws of economics, therefore, are less exact than the laws of natural sciences. Nor are they universally true as the laws of the natural sciences are. Take, for instance, the Law of Demand which states that if the price of any article rises then the demand for that article will fall. Ordinarily, *i.e.*, in the absence of any counteracting forces, this is likely to happen. But it is just possible that people apprehend, say, a famine or a war, and therefore in order to tide over the period of famine or war, they want to store the article in question. In such circumstances, therefore, the demand will rise and not fall even if the price rises. Justly remarks Marshall that 'the actions of men are so various and uncertain that the best statement of tendencies that we can make in a science of human conduct, must needs be inexact and faulty'.<sup>1</sup> He, therefore, draws our attention to the laws of less exact sciences *e.g.*, the science of tides, which explain the rises and falls of the tide twice a day under the influence of Sun and Moon. And it is possible that "having studied the lie of the land and water all round the British Isles, people can calculate beforehand when the tide will *probably* be at its highest on any day at London Bridge or at Gloucester; and how high it will be there."<sup>2</sup> But we know that the whims of nature can hardly be predicted and therefore it is also equally possible that, 'a heavy downpour of

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<sup>1</sup> Economics of Industry, p. 24.

<sup>2</sup> *Ibid* 24.

rain in the Thames Valley or a strong north-east wind in the German Ocean may make the tides at London Bridge differ a good deal from what had been expected.”<sup>1</sup> It is, therefore, wise to use the word ‘probable’, which the astronomers can avoid when forecasting about eclipses.

“The laws of Economics”, therefore, says Marshall, “are to be compared with the laws of tides rather than with the simple and exact law of gravitation.” For, in economics, it is difficult to vouchsafe that certain result will follow from certain causes. Because, the counteracting causes which may be in operation, will vitiate our conclusion. But ‘if the other things remain the same’, that is, in the absence of any counteracting cause, the laws of economics also do hold good. Laws of Economics, therefore, observes Seligman, are ‘essentially hypothetical’. “We must be quite sure” says he, “that the premises are true to actual life before we can draw a conclusion applicable to existing facts.” Or else, “so far as the premises are only partially true, the conclusions are only partly valid”.<sup>2</sup>

Of course, human efforts can modify facts and hence, the validity of conclusions in the science of economics has to be fenced by the condition, that the ‘other things remain unchanged’. Can we, therefore, hold that the laws of economics are useless since they are merely hypothetical? Obviously, we cannot. Because, the laws of other sciences too are hypothetical in the same way. That is, they too state that certain cause will produce certain result if, of course, nothing happens meanwhile to hinder the ‘working of the cause’. The law of gravitation, for instance, tells us that things will fall to the ground. Usually, this is what happens. But if you fill up a balloon with gas lighter than air and leave it, then it won’t fall to the ground. Instead, it will go up in spite of the tendency of the gravitation to make it fall. Evidently then, the validity of such an exact law as the law of gravitation is conditioned by

<sup>1</sup> *Ibid* 24.

<sup>2</sup> Seligman—Principles of Economics.

non-operation of any counteracting cause. In other words, it holds good if other things remain the same. And economics just like other sciences studies the effects of certain causes 'not absolutely' but subject to the condition that the other things are equal and that nothing occurs<sup>\*</sup> to hinder the operation of the causes.\*

**Methods of Study :** The student of economics, like the student of any other science, has to carry out investigation in order to discover the relations between the cause and the effect. He too, has to collect facts, arrange them and draw inferences by interpreting them. And the methods which are used for investigation are (1) Deductive or Abstract (*a priori*). (2) Inductive or Historical (*a posteriori*) and (3) Mathematical method.

**Deductive Method :** The 'reasoning from general principles to particular facts is called deduction.' That is, conclusions are drawn from certain general principles. Such a general principle, for instance, is that when more and more of labour and capital will be applied in the cultivation of a plot of land the yield will increase less than proportionately, unless, of course, there is an improvement in the art of agriculture. And the conclusion drawn from this broad principle is the accepted Law of Diminishing Returns. Or, take again, the Law of Demand derived from the general principle that if the price falls then the demand rises and if the price rises then the demand falls.

**Criticism :** This then, is the deductive method of arriving at particular conclusions from certain general laws about Nature and human motives in society. And the classical writers

\* Certain laws in economics are as true as the Laws of Physical Sciences. For instance, the Law of Diminishing Returns, which though may be held in check temporarily by improved methods of cultivation yet cannot be held in check permanently. Sooner or later the tendency to diminishing returns will be evident. Or, take again, the law of diminishing utility which states that the utility of an additional unit of a commodity to a man diminishes with every increase in the stock possessed by him. There are, again, certain laws which are axiomatic *e.g.*, the law that a country can accumulate capital only when its income is more than its expenditure, *i.e.*, only when there is a surplus.

*e.g.*, Ricardo, Senior, Mill, Cairnes popularised this method by applying it in their investigations.

It has to be admitted that this method has been very helpful in drawing certain useful conclusions in more than one branch of the study of the science of economics. The method has also the merit of being simple. But it is also equally true that the advocates of this method in their haste, ignored facts and the importance of verifications. Universality or permanence of the conclusions arrived at by this method are not often substantiated by facts. So far as the premises are not correct the conclusions necessarily will be mistaken. Moreover, the ever changing circumstances and insufficient data available at any particular time also present considerable difficulties in drawing conclusions by deductive method which will be universally applicable and permanently true.

**Inductive Method :** The 'reasoning from particular facts to general principles is called induction'. That is, unlike the deductive method, in this case, certain facts from history or other records *e.g.*, statistics, are collected, carefully observed and examined and then, that is, after examining sufficient number of particular instances, conclusions are drawn. This method was popularised in Germany by Roscher, Knies, Hildebrand of the German Historical School and in England by Cliffe, Leslie and others.

**Criticism :** The chief merit of this method is that the conclusions reached with its help are corroborated by facts. By referring to facts, it tests and corrects the conclusions of the abstract method of deduction and hence, is an indispensable auxiliary of the deductive method.

It is true that the importance of facts in any science cannot be ignored. But facts are after all facts and mere collection of them will not bear any fruit, or by themselves, they cannot go to make a science. Every science, as we have known before, is more or less hypothetical in nature. That is, rational gene-

realisation from certain hypotheses is indispensable for all sciences. We cannot, therefore, do away with the deductive method. Again, as a social science, economics is connected with the motives and actions of men, which it is difficult to observe and it is also likely that often plurality of causes will lead to intermixture of effects. Induction, unaided by deduction, therefore, has but a limited scope.

**Mathematical School :** Economics, according to this school, is concerned with enquiries dealing with quantitative relation. For instance, it deals with enquiries into Supply, and Demand as regulators of value, or, again, into the changes in the purchasing power of money etc. Some economists, *viz.*, Cournot, Jevons, etc., therefore held that economics is essentially mathematical in character. The importance of the quantitative aspect of the phenomena with which economics deals, however, cannot be denied. And this mathematical method helps in avoiding the errors of reasoning and has the merit of guaranteeing precision in the abstract reasoning which the science of economics often calls for. This method, again, is helpful in so far as it explains the mutual dependence of such economic phenomena as Supply, Demand and Price. But it is to be noted that for mathematical method exact numerical premises are needed and since we hardly have any exact numerical premises in economics, the method, it is argued, should be avoided. Besides, this method will introduce difficulties and complications which it is difficult for the layman to understand.

**Conclusion :** There is not any one method of investigation, observes Marshall which can properly be called the method of economics. He, therefore, suggests that every method should be made serviceable in its proper place, either singly or in combination with others. It is therefore, a mistake to think that there is any rivalry or opposition between these methods. Prof. Schmoller, whom Marshall has quoted, nicely remarks, that, induction and deduction are 'both needed for scientific thought as the right and left foot are both needed for walking.

They rest on the same tendencies, the same beliefs, the same needs of our reason.'

**Relation of Economics to other Social Sciences :** Economics is a social science dealing with man as he lives, moves and thinks in society. Every other social science, which therefore, deals with man and society, makes researches for the betterment and welfare of man and the society he lives in, must necessarily have points of contact with economics. Again, any improvement in any branch of social science will have necessary repercussion on the economic life of man just as any change in the economic life of man will have favourable or adverse reaction on many other allied social sciences. It is, therefore, helpful to make a brief study of the relation which economics has with some other social sciences, *e.g.*, Sociology, Politics, Ethics, and History.

**Economics and Sociology :** Comte, the Positivist philosopher of France would not regard economics as a separate social science. Social phenomena, in his opinion, are not only complex, they are intricately interwoven with each other, always acting and reacting upon one another and undergoing continuous changes. It is, therefore, futile to single out any aspect of social life and make a special study of it. And since sociology, observes Comte, is the only science of society which deals with every aspect of social life, *viz.*, Historical, Political, Economic, etc., there is no point in studying economics separately as a distinct science. Instead, he suggests, that it is better, that it, *i.e.*, economics should be studied within the general social science of sociology.

It is permissible, therefore, to ask: Is there, then, any necessity of studying economics separately? Of course, economics does not claim to be an all-embracing social science. It is concerned mainly with one aspect of social life—the economic aspect. But in its limited sphere it has its own aims which are not identical with the aims of sociology. It is therefore, useless as Marshall says, 'to speak of the higher authority of a uni-

fied social science. No doubt if that existed economics would gladly find shelter under its wing. But it does not exist; it shows no signs of coming into existence. There is no use in waiting idly for it; we must do all that we can with present resources." Granted, therefore, that even if economics be regarded as a branch of sociology, the general science of society, the problems of economics, distinct as they are by nature, need special study and research. And the social phenomena which are to be studied within the scope of economics, although 'interwoven' with other innumerable social phenomena, for purposes of enquiry and research, can to a reasonable extent be separated. Modern thinkers are, therefore, of opinion that economics should be studied separately and not within sociology, if it has to attain the exactness of a science.

**Economics and Politics :** Problems of any modern country may be broadly divided into Political and Economic. And these problems are so overlapping that it is well-nigh impossible to demarcate their respective provinces. A tax, for instance, presents problems both for the economist (in so far as the raising of the revenue of the state is concerned) and also for the politician (in so far as the reaction of the people is concerned). It is a matter of common knowledge that economic institutions of any country can thrive only under suitable political system just as economic conditions have a great bearing on the political institutions of the country. Again, the character of the government of any country much depends upon the progress of the country in its economic sphere. Also, the problems of production, distribution, exchange etc., though, strictly speaking, are problems of economics, yet politics has much to do in ensuring the smooth production, equitable distribution and frictionless exchange. For, without suitable legislations it is difficult to go very far in these spheres. The economic progress of a country largely depends upon suitable legislation.

Extensive economic activities on the part of the political authorities of these days, *e.g.*, allocating country's resources, controlling certain industries, etc., amply demonstrate how closely

these two sciences are connected though strictly speaking each has its own scope which is limited.

Finally, we may conclude by saying that if economics is concerned with our wants for food, clothing and other material things and services, politics is concerned with our wants for things like 'equality, justice and order.' And if by increasing production or 'reducing pressure of scarcity' economic wants can be satisfied, then these wants can be satisfied by 'making people behave in a certain way.' A country's over-all progress therefore calls for close co-operation between the economist and the politician for progress in one sphere much depends upon the progress in the sphere of the other.

**Economics and Ethics :** Ethics is concerned with the moral behaviour of man and has for its object some moral standards which men must strive to attain. Economics, on the other hand, we know is the study of man in the ordinary business of life. That is, while studying economics, we are concerned only with those activities of men which are regarded as economic activities. We must, however, eradicate the misgiving that economic activities imply activities indulged in by men for amassing wealth only. The aim of the study is to increase the welfare of the society. Material wealth is just a means to achieve this end. But notwithstanding the apparent division of their respective domains these two social sciences, ethics and economics, are not mutually exclusive in their ultimate aim. Better moral standard is as much necessary for the welfare of man as is his better economic condition. To take an instance, extreme poverty often leads to begging. And perhaps nothing degrades man morally so much as does begging, *i.e.*, poverty. So the problem of begging in a modern society causes as much worry to the economist as it does to the moralist who is conscious of the evils it breeds. It is, therefore, rightly said that every problem of economics has an ethical aspect just as there is an economic aspect of any problem of ethics. Problems of economics are problems simply because the economist is concerned with the maximum social welfare—his ideal, and ethics has much



to contribute to attain this ideal. Hence it has been rightly observed, that economic science is chiefly valuable "neither as an intellectual gymnastic nor even as a means of winning truth for its own sake, but as a handmaid of ethics and a servant of practice."

**Economics and History :** If the economist strives to build up a bright future for mankind then obviously he has to draw inspiration and gain experience from the past. History furnishes a chronological record of past events. And a study of these is essential for the student of economics to avoid errors. Besides, the present day economic institutions have been largely influenced by the economic history of the by-gone ages. And the modern theories of economics, for instance, the theories relating to production, distribution, exchange etc., are also in no small measure influenced by the history of past events. Similarly, many of the accepted theories of the present age may be rejected, or, their defects, if any, may be remedied by the economists of the ages to come. It is, therefore, evident that the relation of history and economics is inseparable, and the knowledge of the one is incomplete without the knowledge of the other.

**Importance of Economic Studies :** In the present day set-up of the world with hundreds of complicated problems, it is difficult to ignore the importance of economic studies. Not that the study of economics will solve every problem but a careful and scientific study of it will help in understanding the nature of these problems and, therefore, efforts may be made in the right direction to find out proper solutions of these problems with all possible avoidance of wastage.

One significant fact of which every intelligent man is conscious to-day is that while our resources are extremely meagre and limited, the wants which are crying for satisfaction are too many. And it is a common experience, of perhaps all of us, that we have to forego some other thing if we choose to have some thing. For, we do not have enough means to satisfy all of our wants. Economics only suggests the way in which we can

possibly satisfy our wants as far as possible with the minimum of sacrifice and wastage. Again, as the problems of the world are becoming more and more complicated, the confusion and the misgivings of the average man are becoming more and more. It is rightly said, that, economics "is to these misconceptions what chemistry is to alchemy, or astronomy to astrology. It does not furnish a panacea or a creed. But it does serve the negative purpose of discrediting the crank and the charlatan; and it inculcates a technique of thinking without which a sound judgement of affairs is hard to come by."<sup>1</sup>

It must, however, be remembered that although the study of economics helps us to remove our misconceptions, the science itself is neutral between ends. It will be an error if we muddle up economics with ethics. "There can be little doubt" says Robbins, "that one of the greatest dangers which beset the modern economist is pre-occupation with the irrelevant—the multiplication of activities having little or no connection with the solution of problems germane to his subject."<sup>2</sup>

Economics, thus, trains the mind for sustained and impartial thinking about the problems of society. By studying economics one is in a better position to look at all sides of any problem without any bias and to give a balanced judgement.

Earlier thinkers were therefore grossly mistaken when they decried the science as the gospel of Mammon. The student of economics has no 'special veneration' for money but as a practical man of affairs he cannot afford to minimise the importance of the influence of money in human conduct. Evils of unemployment and the dire consequences of poverty on body and mind of man are too glaring to be ignored and too painful to endure. If the efforts of the economist help us to eradicate these evils with the apparatus of thought which the economic theory provides him then indeed we can hardly deny that the

<sup>1</sup> Cairncross—Introduction to Economics, p. 12.

<sup>2</sup> Robbins—An Essay on the Nature and Significance of Economic Science, p. 3.

society needs both the economist and his apparatus of thought—the economic theory.

Satisfactory solution of all these problems, which otherwise means, curing the ills the society suffers from at present is vitally linked up with the welfare of human beings. And if a study of economics by helping our statesmen to train up their minds for rational and scientific thinking helps them to have a correct perspective of values and a balanced and reasoned judgement, we can ill afford to minimise the importance of the study of such a helpful science as is economics.

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## CHAPTER 2

### SOME FUNDAMENTAL CONCEPTS

**Goods :** Goods in economics refer to those desirable things which are capable of satisfying human wants. A machine, food, skill of an artist or the courage of a soldier—all are therefore goods in economics but obviously, they do not belong to the same class or category. Economists, therefore, have classified goods in the following way.

**Material Goods :** These refer to those material things which are useful *e.g.*, a type-writer machine, or a building, etc. These are transferable goods. Material goods may also be non-transferable *e.g.* sunlight or climate of a place.

**Personal Goods :** These again may be transferable like the goodwill of a business or non-transferable, *i.e.*, that part of a man's business relations which depends upon personal trust in him.

Both these goods *viz.*, transferable *i.e.*, capable of being bought and sold, or non-transferable, are external goods. Similarly, there are certain goods which are internal, personal and non-transferable, *e.g.*, the voice of a musician or the skill of a surgeon.

**Free Goods and Economic Goods :** There are certain goods which are not the results of human efforts but are the gifts of nature *e.g.*, sunshine, rains, sands in the desert etc. These goods in economics are known as free-goods. Abundant supply (*i.e.*, in relation to demand) and the absence of man's efforts in their production are the characteristics of these free-goods. On the other hand, anything whose supply is limited, *i.e.*, whose demand is more than the supply and which is the result of human labour is known as appropriated goods or economic goods.

Goods which are free in one place or at one time may, however, become economic goods at any other place or time.

Water by the side of a lake or the sands in a desert, for instance, are free goods. But in cities where there is scarcity of both water and sands these will be economic goods.

**Capital Goods and Consumption Goods :** Goods which are the results of man's previous efforts and cannot be consumed immediately but are to be used as means of further production are known as capital goods *e.g.*, a machine. Again, there are goods which are consumed directly, *i.e.*, from these goods we derive enjoyment directly. These are known as consumption goods *e.g.*, foodstuff, garments etc.

**Public Goods :** By public goods Taussig refers to those economic goods, which, although involve efforts and expense but are supplied gratuitously to individuals. That is, though they are free to the users they are not really free goods *e.g.*, water at the public fountain, parks, museums, bridges etc.

**Utility :** † By goods in economics thus we mean those desirable things which are capable of satisfying human wants. Now, this quality or the capacity of satisfying human wants, in economics is called, utility. Anything, therefore, which has the capacity of satisfying human want is said to have utility.

The concept of utility is purely psychological and correlative to desire or want.\* And since it just means want-satisfying power, the concept is devoid of any moral significance. Consumption of liquor, for instance, may not be morally justified but on this ground we cannot say that wine has no utility. Wine has utility, for, it has the want-satisfying power.

Utility, as it has been observed, "expresses a relationship between a subject and an object from the point of view of the problem of want-satisfaction."<sup>1</sup>

† Forms of utility discussed in Ch. 5 (Production).

\* Of course, before buying any article one estimates the utility he expects from it. But it is possible that he made a wrong estimate and therefore, after buying he finds that he gets less satisfaction than what he had expected. It is therefore, not always correct to hold that utility means the satisfaction we get from the things we buy. It only means the intensity of desire for a thing.

<sup>1</sup> Eric Roll—Elements of Economic Theory, p. 53.

**Wealth :** By wealth or economic goods Prof. Taussig means "those goods which men want, which are not free, and which present the problems of effort of the organisation of industry."<sup>1</sup> A free gift also according to him may become wealth if its supply is limited in quantity, *e.g.*, water in cities where the supply is scarce.

A man's wealth, according to Marshall consists of such material goods as houses, furniture, etc., and also of non-material goods like the goodwill of a business which can be sold.

According to Seligman, anything which can be exchanged is wealth. This, according to him, means that a commodity in order to be regarded as wealth must have four qualities *viz.*, (i) utility, *i.e.*, if it is not useful (*i.e.*, not able to satisfy human want) no one will want it. (ii) It must be appropriable, *i.e.*, if it is not so, then no one can get it; (iii) it must be external, *i.e.*, if not so, then no one can part with it; (iv) it must be limited in amount *i.e.*, if its supply is abundant then no one will give anything for it.<sup>2</sup>

To sum up, then, wealth in economics means those economic goods which have utility, which are scarce in supply, and which are transferable, *i.e.*, external possessions of man. It includes transferable material goods, like house, furniture, etc., and non-material goods like the goodwill of a business etc., which are transferable. But a man's personal faculties and habits, which though contribute directly to make him more efficient and may help him in acquiring material goods, are excluded.\*

**Collective Wealth :** There are certain goods the benefits from which are derived by all the members of a state or a community, *e.g.*, roads, bridges, parks, etc. That is, one has

<sup>1</sup> Principles, Vol. I.

<sup>2</sup> Seligman—Principles of Economics, Ch. I.

\* These could be included in 'Personal wealth' of a man, but this would according to Marshall cause confusion. Hence, according to him wealth simply should always mean external wealth only.

as much claim to these goods as every other member of the state or the community has. So, these cannot be included in the wealth of any individual. These are, therefore, said to be collective goods or wealth, *i.e.*, they are not in private ownership.

**National Wealth :** National wealth or the Social wealth of a country is the aggregate value of (i) the wealth of the individuals of the country (ii) the country's investments abroad (iii) collective properties which are owned by the public authorities. From this aggregate, however, will be deducted the debts, if any, of the public authorities. And the wealth which might be owned by the foreigners inside the country, of course, will be excluded from the national wealth.

Should we, it may be asked, include the free gifts of nature in the national wealth? There is no unanimity of opinion in the matter. Some economists, *e.g.*, Seligman etc., hold that these free gifts are the basis of wealth but not wealth by themselves and therefore, should not be included in the National wealth. Marshall, however, would like to include the Thames in the national wealth of England though it is a free gift of nature. Some German economists go still further and hold that the organisation of a free and well ordered state is an element of national wealth.

**Wealth and Welfare :** So close is the connection between wealth and welfare that for the ordinary man there hardly exists any difference between them. That is, to him more wealth simply means more welfare. But is it really so? Does an increase of wealth guarantee increased welfare? Not necessarily. For instance, better roads, better houses etc., are obvious indications of a nation's wealth. But it is just possible that the inhabitants of a country having palaces, etc., mostly rot in penury and are illiterate, ill-fed, ill-clad, and over-worked. Here at least, we find that more wealth does not mean more welfare. On the other hand, wealth has increased at the cost of the welfare of the people of the country. Again, much depends

on the way the increased wealth of a country is distributed amongst the people. Unequal distribution, *i.e.*, making the rich richer and the poor poorer will mean a definite loss of welfare.

Wealth, therefore, is not identical with welfare. Nor does accumulation of wealth guarantee increased welfare. "Wealth is a stock of goods, welfare a state of mind. Wealth may be creative of welfare by satisfying our wants ; but it cannot be welfare."<sup>1</sup>

It is, however, to be admitted that an increase in welfare largely depends upon an increase of wealth, just as, a loss of wealth is sure to decrease the welfare of the people of a country.

**Value :** As we know, the term value is used in more senses than one. We say, for instance, that the teaching of *Gita* is very valuable. Naturally, we have in our minds the religious or the moral value. Or, again, when we speak of the high value of, say, Beethoven's music, we use the word in the æsthetic sense. Thirdly, when we speak of the value of fresh air or pure water, we mean their usefulness, their value-in-use or utility. The term value is used in yet another sense. When we say that the value of gold or silver is very high we use the word in this sense. Here, by value, we mean the exchange value of gold or silver, *i.e.*, their power in exchange. Value-in-exchange or the exchange value of gold or silver means simply how much of other commodities can be obtained in exchange of a certain amount of gold or silver.

In which sense, then, should we use the term value in Economics ? In economics, the term is used in the last sense, *i.e.*, by value in economics we should mean the exchange value or the power in exchange of a thing.

**Value and Utility :** Utility or usefulness only then does not govern value in economics. Take for instance, air and diamond. Without air, we know, we cannot live. We, there-

<sup>1</sup> Cairncross : Introduction to Economics, p. 15.



fore, cannot deny that air has immense utility to us. But has air any value in exchange? Obviously not, for nothing possibly can be exchanged for air. So, it does not command any value in the sense in which we use the word in economics. On the other hand, diamond is a very valuable stone, although men can live without having it, for, it is not useful in the sense in which air or water is useful to us. But diamond is valuable because it has high exchange value, *i.e.*, quite a lot of other commodities can be had in exchange of a little piece of diamond.

Of course, nothing can command a great exchange value if it is useless or has no utility. Similarly, things which can be had in abundance, *i.e.*, whose supply is unlimited cannot have high value-in-exchange. Exchange value, therefore, is determined by utility, on the one hand, and scarcity on the other.

**Value and Price :** Value, then, is a relation in exchange or a ratio between the things which are exchanged. Value of a thing, therefore, simply indicates how much of other things will be given for it. For example, if 1 seer of sugar can be obtained by giving 2 seers of, say, wheat, then the value of 1 seer of sugar is equal to 2 seers of wheat. Similarly, the value of sugar could be expressed in terms of tea, milk, coffee, etc., if we knew how much of these things would be given for a certain quantity of sugar. But when the value of a thing is expressed not in terms of any other commodity but in terms of money we call it '*price*.' Price of a thing, therefore, is its value expressed in terms of the medium of exchange, *i.e.*, in terms of money. That is, if one seer of sugar or two seers of wheat can be exchanged for one rupee then we will say that the price of one seer of sugar or two seers of wheat is Re. 1. The relation in exchange or the ratio of 1 seer of sugar or 2 seers of wheat with the unit or units (here Re. 1) of money is the price in economics. It (price) thus is the ratio at which a commodity exchanges for money.

**Can there be a general rise or fall in Values or Prices ?**  
Now that we have known what is value and what is price it is

not difficult to answer the question. A general rise or fall in values is an absurdity. Value of any commodity, say rice, is said to be high only when more of other commodities, *e.g.*, wheat or flour etc., can be obtained in exchange of it. In other words, this simply means that the value of these commodities, *i.e.*, wheat, flour, etc., has fallen in terms of rice. Similarly, when we say, that the value of rice has fallen—we mean that less of other commodities, *e.g.*, wheat or flour, will be given in exchange of a certain amount of rice. Hence, it means that the value of wheat or flour has risen. So, there can be no general rise or fall in values.

This is, however, not so with the prices. Instead, a change in the general prices in either direction, *i.e.*, a rise or a fall, is not only possible but is a very familiar phenomenon to us. The reason is that other things remaining as before, if the quantity of money increases, whatever may be the cause, then there must occur a general rise in prices. Similarly, if for some reason or other, the quantity of money becomes less, then a fall in general prices will be noticed.

A general rise or fall in prices thus indicates a change in the value of money which is inverse to the level of prices. That is, high or low prices indicate a fall or a rise in the value of money.

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# **BOOK II**

## **CHAPTER 3**

### **CONSUMPTION**

**What is Consumption in Economics ?** Man can neither create nor destroy matter. Who are then the producers and the consumers of the innumerable material objects we see around us ? Obviously, no angel or ghost produces them or consumes them. The facts are that the materials of which the objects are made were there beforehand and by their efforts men have only readjusted them in such a way as has made them more useful to them. For example, by their efforts men turn logs of wood, which were there, into furniture which are more useful than the logs of wood. When, therefore, we say that men have produced them, *i.e.*, the material objects, we mean no more than that they, by their efforts, have changed the form of the already existing matter—they have ‘re-arranged’ matter in such a way as has made it more convenient for use. That is, by efforts they have made it more useful for the satisfaction of their wants. So, what men have created is not matter but the added utility which the matter now possesses by being re-arranged by their efforts. Similarly, these material objects will remain in possession of men, may be for generations, until they are worn out and destroyed in course of time. So, while we say, that we consume things we only mean that we consume the utilities which these things possess while time destroys them slowly and gradually. And it is in this sense that we are said to be consuming, say, buildings, motor cars, furniture etc. We indeed do little to wear them out ourselves ; we only use them so long as we possess them and it is time which wastes them gradually.\*

\* When wealth is used in the production of further wealth we would technically call it productive consumption. This, however, includes not all the consumption of productive workers but only that which is required for

**Sources of Human Wants :** It will be of immense interest to any student of economics to know how from a few wants of men while they were leading the lives of savages, innumerable variety of wants have cropped up with the progress of human civilisation. Hunger and the need of protection against nature and possibly against other animals were perhaps the two broad sources of man's wants which forced him to act. Gradually, fresh wants cropped up with the progress of human civilisation. Man gradually became a more thinking animal and outgrew the stage when his wants were few, that is, only those which were physiological in character and without the satisfaction of which it would be difficult for him to survive. Now he began to look for change and variety in food, for better house, dress etc., and the process continued until he learnt to crave for distinction. It is true, that in different parts of the world people live in different stages of civilisation. And the type of food they eat, the dress they wear, their social customs, habits and tastes are different. Their nature of wants, therefore, would obviously, be different according to these differences in their ways of living and customs. But everywhere, broadly speaking, the sources of wants are the physiological needs of man, his desire for change in food, dress, for better accommodation etc., and when these are satisfied fresh wants arise from his craving for distinction.

Wants, therefore, in the earliest stages of our civilisation prompted men to act and stimulated their productive activities. But it is significant to note that satisfaction of one want or desire has always been "merely a step to some new pursuit." No wonder, therefore, that with the progress of civilisation the activities in which men indulged have always given rise to fresh wants. And it is a ceaseless process. For, in every stage of his progress man 'is destined to contrive and invent, to engage

their efficiency, Marshall himself, however, held that this distinction would be misleading, for, 'all wholesome consumption is productive of benefits, many of the most worthy of which do not directly contribute to the production of material wealth.'

in new undertaking ; and when these are accomplished, to enter with fresh energy upon others.' Progress of science, new tastes and habits, craving for higher standard of living all these will continue to increase our wants when the existing wants are satisfied.

**Classification of Wants: Necessaries, Comforts, Luxuries :** Human wants have been classified as necessaries, comforts and luxuries. This can be illustrated by taking a list of the articles which a member of a middle class family of, say, Bengal consumes in course of a day. Two meals a day, tiffin twice, a cup or two of tea and possibly a few cigarettes complete the list which an adult presumably consumes in course of the day.

Now, meals (rice or atta or anything) are absolutely necessary for his bare existence *i.e.*, without these it is difficult for him to live. So, these are called Necessaries for Life. Suitable accommodation is, of course, such a necessity.

Tiffin, say a little amount of fried rice or things like this is, of course, important but we know that one can live without tiffin twice a day. But nevertheless, we cannot deny that good tiffin is necessary for maintaining the efficiency of a man, specially so, if he is a brain worker. So, the necessaries of this type are called Necessaries for Efficiency.

Tea and cigarettes, however, are neither necessary for a man's existence nor for maintaining his efficiency. Even then we know that men often forego consumption of necessaries (*e.g.*, full meals or better tiffin etc.) for consumption of tea and cigarettes. These are classified as Conventional Necessaries in economics.

It is, however, true that these necessaries for life and for efficiency will be different to different persons or group of persons according as the climate of the countries in which they live or the type of work they do differ and also according as their social status differs. For example, people of tropical or cold countries would require different types of cloth for their mere existence or sustenance. Similarly, a carpenter or an

actress, would require different types of tiffin for maintaining their efficiency.

**Comforts :** There are certain things *e.g.*, scented hair oil etc., the consumption of which is likely to increase the efficiency of the worker but not in proportion to their cost. That is, the cost which has to be borne for consuming these articles is more than the likely increase in efficiency because of their consumption. Such things are classified as comforts.

**Luxuries :** Such articles as costly wine etc., the consumption of which not only does not increase the worker's efficiency but is likely to decrease it, are known as luxuries.

Luxuries, however, may be harmless *e.g.*, costly ornaments or harmful *e.g.*, wine.

It is, however, difficult to draw lines of distinction between necessities, comforts and luxuries, firstly because, our ideas about these things are constantly undergoing changes and secondly because, the same thing may be regarded as either necessary or comfort or luxury at different times and in different places according to the differences in climate, custom, convention, occupation, social status of the consumer etc.

**Consumption of Luxuries: Is it economically Justifiable?** Instead of adding to a man's efficiency, if such consumption is likely to diminish it, then why not stop this waste? In other words, why not stop production of these luxuries, some may suggest. The student of economics, however, cannot give his verdict so easily. He has to see, without any bias, if there is any valid ground of justification for the production of these luxuries in economics. And the consumption of the luxuries even if they are harmful directly may be justified on the following grounds : (i) that it serves as an incentive to work (ii) that it encourages production of fine arts (iii) that it ensures employment for many.

Now, it is argued that it is true that the consumption of luxuries may serve as an incentive to work and lead to the

growth of fine arts but cessation of the production of these goods need not lead to unemployment as is apprehended. For, the factors of production which were so long engaged in producing luxuries, will in course of time, (if they are released), be employed in the production of socially useful goods. Of course, if this happens no doubt it will be beneficial to the whole community. But is it likely to happen? We know, only the rich can afford to spend money on consumption of luxuries and thus stimulate their production. Now, more employment is less likely if the money, now not spent because of the stoppage of the production of these luxuries, simply remains in the pockets of the rich people. It is undeniable, therefore, that if the production of these goods is stopped, unemployment, *i.e.*, of the involuntary type is likely to follow. Mere stoppage of the production of luxuries, in the present day capitalistic structure of the society will, therefore, create more problems than it will solve. If, however, the present day inequality of incomes could be eliminated by a redistribution of wealth, *i.e.*, if more purchasing power could be made available to the middle and the poor classes of people, which would be spent on consumption of useful goods now to be produced in lieu of the luxury goods, then, of course, unemployment could be prevented and the effects would be socially beneficial. But this brings the question of changing the social structure.

**Human Wants: Their Characteristics :** The pinch of unsatisfied wants is perhaps an experience which everybody has. This is so because there is no limit to human wants while the resources with which to satisfy them are extremely limited. Immediately when the more urgent wants *e.g.*, want for food, shelter, etc., are satisfied, invariably fresh wants crop up in their places. Men, for instance, when their elementary wants are satisfied, may want better food, better accommodation, books, pen etc. That is why human wants are said to be *unlimited*.

Although human wants are unlimited, it is, however, true that particular wants can be satisfied because there is a limit

to a particular want. A hungry man's desire for food, for instance, will be satisfied when he is given something to eat. \* So, we see that there is a *limit to a particular want*.

Since wants are unlimited and the time and the resources at our disposal are very limited, we have to make a choice from amongst the innumerable wants which compete with each other for their satisfaction. We may, for instance, have to choose, either to spend some money on food or on dress, or should we spend a holiday by joining a picnic or by taking rest at home etc. Wants are, therefore, said to be *competitive*.

Certain things, again, can satisfy our wants provided we have them jointly with some other things, *e.g.*, pen and ink. Singly, either the pen or the ink will not satisfy our wants. Wants are, therefore, said to be *complementary*.

**Law of Diminishing Utility :** Although human wants are unlimited yet we know that there is a limit to each particular want. It, therefore, naturally follows that if an individual is given more and more of a particular thing for which he had a desire or want, then the benefit which he will derive from each successive increase in the stock of the thing will increase but at a diminishing rate and sooner or later, a point will come when the want will be completely satisfied, *i.e.*, any addition after that point is reached, will only have a disutility. In other words, the more we have of a thing the less we want it more, because the utility of the additional units of the thing diminishes with every increase of the stock we have. The utility of the additional units, that is to say, depends on the stock of the thing an individual already possesses. The Law of Diminishing Utility or of Satisfiable Wants is a generalisation from this tendency of human nature. In the words of Marshall the Law states that 'the additional benefit which a person derives from a given increase of a stock

\* Certain desires, of course, cannot be satisfied. For example, a miser's desire for money will never be satisfied. But then the behaviour of a miser is not normal.



of a thing diminishes with every increase in the stock that he already has.'

Now, since the price of a thing measures its utility, the Law may be conveniently stated in terms of prices for an easy understanding. A boy for instance, is willing to eat some cakes. Now, according to this Law, the utility of the cake will be decreasing as he will be getting more of it and therefore, he will offer lower and lower price for each additional cake which will be offered. Let us assume that for the 1st cake the boy is willing to pay annas ten (-/10/-), for the 2nd, annas eight (-/8/-), for the 3rd, annas five (-/5/-) and for the 4th, annas three (-/3/-), respectively, and the boy's willingness to eat cake is now completely satisfied so that even if the price be reduced any more the boy is reluctant to purchase any more cake which may have to him disutility. This simply means that the boy's utility for the 2nd, 3rd and the 4th cakes gradually diminished from annas ten to annas eight, from annas eight to annas five, and from annas five to annas three, because he was having more and more of it.

In our illustration, the 4th cake is the cake which the boy is just induced to purchase, that is, he reaches the margin of doubt while he buys this one (he neither purchases 3 nor 5) and therefore it is said to be his marginal purchase and the utility he derives from this cake is said to be the marginal utility. It is, therefore, stated that the marginal utility of a thing diminishes to a person with every increase in the stock or the amount of it which he already possesses.

This Law may be illustrated by means of a diagram.

In fig. 1 (p. 33) along the horizontal axis OM, suppose that OC, CA, AK, KE, ES, are the 5 cakes, i.e., along OM we measure the units of cake each of which is, of course, of uniform size and quality. And along the perpendicular axis OP suppose that we measure the prices the boy is willing to pay for the different units of cake, that is, in other words, the utility or the satisfaction which the boy derives from the separate units of cake is

measured by the offer he makes for each of them. We, then notice, that for the 1st, 2nd, 3rd, 4th, and the 5th cake, which in the figure are represented by OC, CA, AK, KE and ES, the boy is willing to pay  $CC^1$ ,  $AA^1$ ,  $KK^1$ ,  $EE^1$  and  $SS^1$  prices respectively which means that for each additional cake the boy is willing to

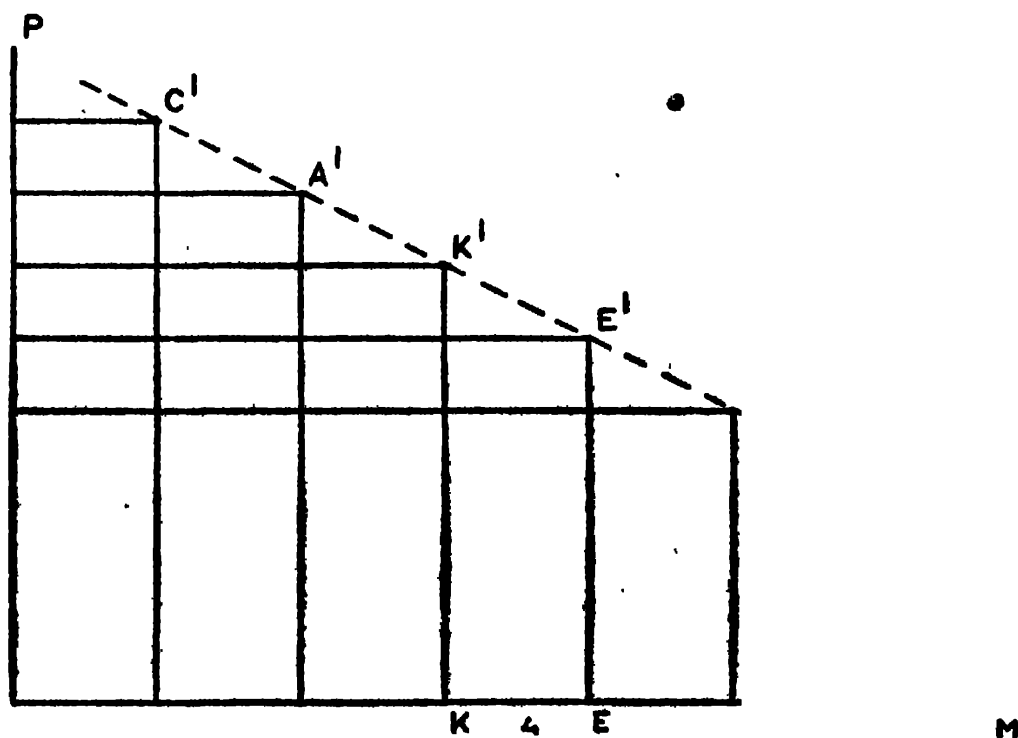


Fig. 1

pay lower and lower price simply because the satisfaction which he gets from these successive units is becoming less and less as he is consuming more and more of cakes. The curve  $C^1 A^1 K^1 E^1 S^1$  which is known as the diminishing utility curve will thus always slope downwards to the right since the utility of the additional units of things which a person gets diminishes as his stock of it increases.

**Limitations of the Law of Diminishing Utility :** The following are the limitations of the Law of Diminishing Utility. In the first place, the assumption that 'other things are equal' itself is an important limitation. For, in this fastly progressing world, 'other things' are more likely not to remain equal. Specially, the income of the individual consumer or the prices of

other goods can never be expected to remain the same over a period of time. Similarly, the tastes, preferences and the habits of the people also are constantly undergoing changes. The assumption that other things remain equal is thus an unreal one.

An implicit condition of this law, thus, is that we do not allow any time for any alteration in the character or tastes of the consumer. If, therefore, time is allowed then the law may not hold good. It is not unlikely, that the more good music a man hears the stronger becomes his desire for music. Or, the more a man drinks the more acute is his desire for drinks. These, however, cannot be cited as exceptions to the law for in both the cases the taste or the habit of the consumer has undergone change with the passage of time. If, however, we take an individual, as he is, and time is not allowed for any change in his tastes and habits, then it is true that the marginal utility of a thing to him will diminish with every increase in the stock he has or the supply of it to him.

Secondly, the marginal utility of a thing to a person instead of diminishing, may increase till a certain point is reached, after which the law will operate *i.e.*, the utility of the thing will then steadily diminish. In other words, in some cases the law comes into operation not immediately but after a certain time. To a very thirsty man, for instance, the second glass of water may be more welcome than the first because it is possible that his thirst will be increased after he drinks the first glass of water, specially, if water is offered in a very small glass and therefore, the utility of the second glass of water will be more to him. It is, however, true that after a certain time his utility of successive glasses of water will diminish even if they are offered in the small glass, as before.

Thirdly, utility being a purely psychological concept, often it is true that the utility of certain things *e.g.*, most fashionable dress, etc., depends not on the stock of these things one possesses himself but on the stock possessed by others.

Take, again, the case of the man who is interested in the

collection of such things as stamps and other rare things. It is likely that his desire for addition to his stock will go on increasing as he succeeds in obtaining more and more of such things. If, however, as Viner observes, the complete set of a thing is taken as the proper unit of observation then any addition to this unit will yield decreased satisfaction. If, for example, there exist only two pearls of the same type—these two should be taken as one unit and any addition of pearls of the same type to this unit will yield diminishing utility.

These limitations, however, cannot disprove the existence of the law, which, we know from experience, is operative so widely and with so few exceptions.

**Total Utility :** Total utility is the aggregate utility obtained by adding together the utilities of all the units of a stock of similar goods possessed or consumed by a person at a given time. In other words, it is the utility of the whole amount of a thing possessed by an individual at a given time. In our illustration (Fig. 1, p. 33) the total utility of the cakes to the boy, if he consumes four cakes, will be,  $-/10/- + -/8/- + -/5/- + -/3/-$ , i.e., Rs. 1/10/-.

The total utility of a thing possessed by an individual increases with every increase in his stock but this increase is not as fast as the increase of his stock i.e., total utility increases with the addition of fresh units but it increases at a diminishing rate. This is obvious, for, since the units are all uniform, the satisfaction the individual derives from every added unit will be less than the satisfaction he derived from the previous one he already possesses.

Total utility of a thing, therefore, measures the strength of the individual's demand for the whole supply of it ; while the marginal utility measures the intensity with which he wants a little more of it.

**Marginal Utility :** The utility of successive units of a thing which, of course, are all uniform, according to the law of diminishing utility, becomes less and less to a person as he gets

or consumes more and more of it. That is, the more he gets the less he wants still more. And if the process continues, *i.e.*, if the man is given more and more of a thing, a position will come when he will be on the margin of doubt whether it is worth his while to spend the money for obtaining the article or not. That is, he reaches a point at which the satisfaction which he gets from an additional unit is just equal to the price he pays for it. This, then, is the unit which he is just induced to purchase—he neither buys any more nor stops before buying it—and hence this is the marginal purchase and the utility of this unit *i.e.*, of his marginal purchase, is the marginal utility of the thing to him.

It should, however, be remembered that the units, by assumption, are all uniform in every respect and therefore, the utility of each unit in the stock is the same and equal to the marginal utility, which we know is the utility of the unit which is obtained or consumed last. The marginal utility, again, of any commodity diminishes with every increase in the stock of it which a man possesses. This is so because the marginal unit is not supposed to be a fixed unit. Instead, the price of the thing, the conditions of its supply and demand, the intensity of a man's desire to have it, etc., all these factors influence the number of units a man will consume under given conditions. But the utility of the last unit consumed under any given set of conditions is the marginal utility. In other words, marginal utility is the utility added to the total utility by the addition of the last increment consumed or possessed by an individual at any given time.

**Marginal Utility and Value or Price :** The margin, we know, is not a fixed point. It shifts with every change in the conditions of supply of a thing, the intensity of the desire of the buyer and the price of the thing. A person, for instance, will consume more of a thing if its supply expands (in the sense that the article now will be used for those less urgent purposes which scarcity prevented earlier), or if his intensity of desire increases or again, if the price of the thing falls, may be for the

expansion of the supply. Alternatively, the person will consume less if the supply contracts, his intensity of desire becomes less than what it was before, or if the price of the thing rises. The margin, therefore, shifts with every change in the Supply, Demand or Price. But it is true in all cases that the price one will offer for a commodity will just balance his utility of the thing at the margin, *i.e.*, the price an individual is prepared to pay for his marginal purchase is exactly balanced against the satisfaction which he expects from consuming it, *i.e.*, its utility. We may consume a commodity more or less but we stop at the point when we consider that the utility we get from it is just equal to the price we pay for it. For, the price we are ready to pay is the only objective test of the psychological satisfaction that is, the utility, we derive from consuming anything.

We must, however, remember that the units of the commodity are all uniform, *i.e.*, they are all homogeneous and interchangeable. Marginal unit, therefore, does not refer to any specific unit. It is identical with all other units which a person may like to consume. It is, therefore, an error to think that the value of a thing is determined by the utility of this unit, *i.e.*, the marginal unit. Instead, the conditions of the total supply and demand determine the value as well as the margin. Any change in either the supply or the demand, as we have seen, is likely to alter the value and hence the margin too.

Similarly, it is an error to say that the cost of the marginal unit governs value. For, the marginal unit is one among all other units offered for sale which (*i.e.*, the marginal unit) also the buyers want to buy along with other units. The total supply (which includes the marginal unit also) and the total demand determine the margin as well as govern the value. The marginal unit is a part of the total supply and the total supply minus this unit will alter the value because it will alter the total supply. Value, therefore, is not determined by the margin. Total supply and total demand determine the value but the margin is only a position at which it is determined.

But we must go to the margin as says Marshall, 'to study the action of those forces which govern value'.<sup>1</sup> Value does not refer to the utility in general or to total utility—it is the utility of the marginal unit or an expression of the marginal utility.

**Importance of the study of the margin in economics :** Apart from the fortunate few who are very rich and therefore, can afford to make their purchases without enquiring the price, most of us, with endless wants and limited incomes have to pause before we decide to purchase a little more of a thing or a little less of it so that we may be in a position to buy a little less or a little more of other things which we also want. And where do we pause? We necessarily pause at the point which is known in economics as the margin. We forego a little consumption of a thing in order to have a little more of other things we need. We stop, that is to say, when we reach on the margin of doubt—whether should we spend the money to obtain the article or not? Herein comes the importance of the analysis in terms of the margin. In case of a rise in the price, or, say, a contraction of the supply, these marginal purchasers, *i.e.*, who are just on the margin of doubt (whether to purchase a little more or not) would cease to buy and this may force the producers to keep the price down *i.e.*, within the reach of these purchasers.

Again, in the case of an individual consumer, proper attention to the margin will help him to get the best out of his income which in most cases is limited. His total expenditure can only give him the maximum satisfaction if he succeeds in spending the income in such a way (*i.e.*, by buying a little more of a thing or a little less of other things and thus constantly adjusting and re-adjusting his budget so that it stretches to the furthest limit), that he obtains equal marginal utility of money in case of all his purchases, that is, in each of its uses.

**Law of Equi-marginal Utility :** Any commodity may have various uses. But how, that is, for what purpose or pur-

<sup>1</sup> Marshall—Principles.

poses it will be used depends on the person who possesses it. One thing, however, is certain. Assuming the owner will behave rationally, he will use so much of it for such and such purposes as will give him the maximum satisfaction. If, for instance, he finds that a particular distribution does not yield him maximum satisfaction, then he will alter it, that is, he will put more of the thing to a certain use by assigning less of it to a certain other use. In this way, he will go on altering its uses until he succeeds in obtaining equal marginal utility from each of the uses to which he puts it. For, when he succeeds in doing this he gets the maximum satisfaction.

Let us take an illustration. Suppose, for example, that Mr. A has only 3 yds. of cloth. With this he can have, say, either 1 shirt, or 1 half-shirt and 2 handkerchiefs or again, if he likes, he can have 12 handkerchiefs. Now, he can make only one shirt and then repent because he does not have handkerchief which also he needs. Again, he can make 12 handkerchiefs but then also he will repent because in that case he has to go without any shirt. So, in neither case, he gets the maximum satisfaction. But it is possible that he will get the maximum satisfaction if he makes, say, 1 half-shirt and 2 handkerchiefs. In this case he gets equal marginal utility from each of the uses to which he has put the cloth he had. This is what is known in economics as the Law of Equi-marginal Utility.

Similarly, while spending our limited money income on several consumers' goods, we will go on altering our decisions, that is, spending a little more on some article and a little less on some other article until we get equal marginal utility from the last rupee spent on different articles. If, for instance, one needs both shirts and dhotis, then he has to spend his income in such a way that the marginal utility of money will be the same in the purchase of shirts as in the purchase of the dhotis. If not, that is, if he spends more on dhoti and then repents for having not sufficient money to be spent on shirts then he does not get the maximum satisfaction by spending his income.



In the same way a man may so distribute his income between his current and future satisfaction (saving) that in each case he gets equal marginal utility from the money. Of course, he has to take into account such factors as uncertainty of the future, difference in the value which is likely to weigh between present and future consumption etc., so that, the last rupee spent now has the same marginal utility as the last rupee saved.

**The Concept of Utility: Its Limitations :** The concept of utility however helpful it may be in our study of the problems in different branches of economics has serious limitations too.

Utility, as we have known, is a purely psychological concept and, therefore, incapable of accurate measurement. Money, it may be pointed out, can measure the utility. But then this implies that money has constant marginal utility, which contradicts the Law of Diminishing Utility. For, we know that out of his limited income when a man spends some money on some article then the marginal utility of the money which remains with him increases (just as the marginal utility of the article which he has purchased decreases as the stock of it increases) and cannot remain constant. The assumption that money has constant marginal utility, thus, is unreal. Secondly, the concept of utility is helpful because the price a man pays for any article he purchases is supposed to be equal to the marginal utility of the thing. But does a man really rationally calculate and balance the price and the utility while making his innumerable purchases? We know from our experience, that the force of habits, instinct of limitation, impulse etc., often compel men to behave irrationally (or rather non-rationally) and when they do so, the utility theory does not hold good. Thirdly, the utility theory tells us that as the stock of a thing possessed by a man increases, the marginal utility of it decreases to him. This means that the marginal utility of the thing depends on the stock one has of the thing at any given time. While studying the Law of Diminishing Utility we have seen that this may not be always so. For instance, the utility of such things as

the most fashionable dress etc., to a man may depend not so much on the stock he possesses as on the stock possessed by others. Utility of such things to us increases since we want to have them because others have them. It is also difficult to measure the utility of a thing because the same thing may have different utility at different times. A boy of 10, for example, may read a good novel and may derive a certain amount of pleasure but he is sure to derive much more pleasure from the same novel if he reads it again, when say, he is 30.

These are the limitations of the concept of utility. Some modern thinkers therefore want to replace it by a more scientific and precise concept. "If marginal utility has no exact sense," observes Mr. Hicks, "diminishing marginal utility can have no sense either."<sup>1</sup> He therefore, wants to replace it by what he calls the Principle of Diminishing Marginal Rate of Substitution.

**The Principle of Diminishing Marginal Substitutability:** The concept of utility, therefore, as we have seen is inexact and inseparably associated with certain confusions. For instance, while it should mean 'intensity of desire' or 'desiredness,' not unoften people are apt to mean by it desirability or more aptly, usefulness. Hence the muddling up of economics with ethical considerations. Again, the Utilitarians' belief that utility is quantitative and, therefore, can be measured accurately has also contributed to the confusion. Moreover, we, as consumers do not demand 'isolated' goods. The truth is, we demand goods combinedly, that is, we are interested in a combination of related goods. The theory of marginal utility overlooks this significant point when it assumes that it is possible for us to know the utility of any commodity in isolation (that is to say, without any reference to other commodities which also we need). The fact, however, is, as we have stated, that we are interested in a combination of goods and it is likely that we may prefer one combination of goods to another. It is, therefore, difficult to

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<sup>1</sup> *Value and Capital* p. 20.

measure utility of any article taken in isolation, that is, separately.

Some recent thinkers, therefore, to avoid these confusions have suggested the use of the word 'preference' in place of utility and instead of marginal utility, we may therefore, say, 'marginal preference.'

The points which emerge then, in brief, are, firstly, that each one of us has various wants which we want to satisfy, as far as possible, with our limited money income. And, normally speaking, we do not have absolute preference for any article. In other words, we have various alternatives before us and we have always to make decisions as to how much of each article we would consume foregoing a little or more of other commodities from the various alternatives we have in order to get the maximum satisfaction by spending our limited money income. And, it should be noted, that while we forego more units of any article for obtaining one unit of any other article—the stock of the former is decreased and that of the latter is increased, which just means that for the former our preference will increase and for the latter it will decrease.

The Principle of Diminishing Marginal Substitutability may therefore be illustrated thus. Imagine that a person consumes both sugar and gur and although he does not have absolute preference for either, he has a greater liking for sugar. He may, therefore, forego consumption of one seer of sugar if he is offered 4 srs. of gur in its exchange. This means that his preference for 4 srs. of gur is equal to that of 1 sr. of sugar. In other words, the marginal substitutability of sugar (for gur) is 4, because 1 sr. of sugar can be substituted for 4 srs. of gur.

Put the other way round, the marginal substitutability of gur (for sugar) is  $\frac{1}{4}$ , since 1 sr. of gur is substitutable for  $\frac{1}{4}$  sr. of sugar (because we know 4 srs. of gur substitute for 1 sr. of sugar).

By marginal substitutability of one good for another we, therefore, mean the relative usefulness of small increments or

decrements of various goods to a consumer. As we have noted above, the marginal substitutability of one good for another can be measured by the units of the other goods for which one unit of the good increased can be substituted, without, of course, making the consumer either better off or worse off. And although it is impossible to measure accurately the absolute usefulness either of sugar or of gur to the consumer, the relative preference or usefulness of small increments or decrements of the two articles may be measured. When, therefore, we say that the marginal substitutability of any good is greater, we simply mean that larger must be the amount of the other goods that must be substituted for a sacrifice of a unit of it if the individual is not to be made worse off by the substitution. This marginal rate of substitution\* of any article for another will, however, diminish as one's stock of it increases and that of the other decreases (which means that more of it will be given to obtain other articles in exchange). In our example, when more of sugar is obtained, the less will be its marginal substitutability for gur. And possibly with the consumer's (who is giving more gur for obtaining sugar) increased stock of sugar he may not be agreeable to give 4 srs. of gur for 1 sr. of sugar. Instead, he may prefer now to give, say, 3 srs. of gur for obtaining 1 sr. of sugar. That is, the marginal substitutability of sugar for gur will be 3 because 1 sr. of sugar can now be substituted for 3 srs. of gur. Similarly, the marginal substitutability of gur for sugar will be  $1/3$ , because 1 sr. of gur is now substitutable for  $1/3$  sr. of sugar (since 3 srs. of gur substitute for 1 sr. of sugar). It is, however, to be noted that if there are large number of substitutes then the marginal preference of a person for a commodity will be elastic. The elasticity of an individual's preferences depends upon the range of available substitutes.

**The law of Diminishing Marginal Substitutability which**

\* By marginal rate of substitution is meant the ratio of one commodity in terms of another when the relative preferences of an individual for the two commodities are equal.

replaces the older theory of Marginal Utility is an improvement on it for more than one reasons. In the first place, it does not believe in the quantitative notion of utility nor does it make the unreal assumption that the marginal utility of money is constant. What is more important is, that, it does not believe that the demand for a commodity depends on our desire for that particular commodity alone. Instead, it points out the significant fact that our demand for a thing also depends on our desire for various other commodities which we would like to buy at the same time.

**Demand :** No one, as we have remarked in the beginning of this book, has every thing he wants. Every body, therefore, may desire to have those things which he does not have. Mr. A, for instance, who has an income of say Rs. 50/- per month and no other resource, has no car and therefore he desires to have a car. Or, again, take the case of Mr. B who although has the means and the desire to have the car, is keen on saving whatever money he has for his son's education or wife's ornaments instead of spending it for the purchase of the car. Do such desires then constitute demand in economics? No. For, we find that while Mr. A has the willingness to have the car, he has not the ability to spend money for purchasing the car and Mr. B, although he has the ability to spend the money for purchasing the car, is not willing to spend it. So, neither the desire of Mr. A nor that of Mr. B will affect the number of cars which will be actually sold. For, theirs' is a mere wish or a desire for a car. But a mere wish or a desire or need does not constitute demand in economics. Only when such a wish or desire is backed by the willingness and ability to pay, it will constitute a demand in economics.

Nor, again, has the term demand any meaning, without any reference to a price. Demand always means demand at a price. There is no point in saying that the demand of a thing is great or small without mentioning the price of it. For, the volume of goods demanded will vary with the changes in their prices. Alter the price of a thing and the amount demanded

will also be altered. Less, as we know from our experience, will be demanded if the price of a thing is raised and more will be demanded if its price is lowered.

In economics, then, demand for a thing, i.e., demand at a given price, refers to the quantity or the amount which the people are willing to buy at that price at a given time and under given conditions.

**Demand Schedule :** Demand, thus, is inseparably associated with a certain price. Demand at one price is not the same as the demand at a different price. A person's demand for a thing, as we have seen, changes if its price changes. If the price is low, more will be demanded; if the price is high, less will be demanded. If we make a schedule indicating in it the different amounts of the thing which he will purchase at different prices then this schedule will be his Demand Schedule for the thing.

Take an illustration. In the following table, on the left column are mentioned the prices and on the right column are mentioned the amounts (in our case, the number of mangoes) that the person will buy at those prices.

<i>Price of a mango</i>			<i>Number of mangoes demanded</i>
Rs.	As.	P.	
0	8	0	5
0	6	0	7
0	4	0	10
0	2	0	15

This tabular statement of the different amounts of mangoes demanded by the person at different prices at a given time is his Demand Schedule or, in other words, the Individual Demand Schedule. We notice from this statement that at a given time and under given conditions when the price falls the number of mangoes demanded increases.

The same thing may also be illustrated with the help of a diagram.

In Fig. 2, along the vertical axis  $OY$ , we measure the different prices, and along the horizontal axis  $OX$ , we measure the amounts, that is, the number of mangoes demanded at these different prices. We, therefore, notice that when the price is  $MM^1$ ,  $OM$  units of mangoes are demanded; when the price is a little less, that is,  $AA^1$ ,  $OA$  units are demanded; when the

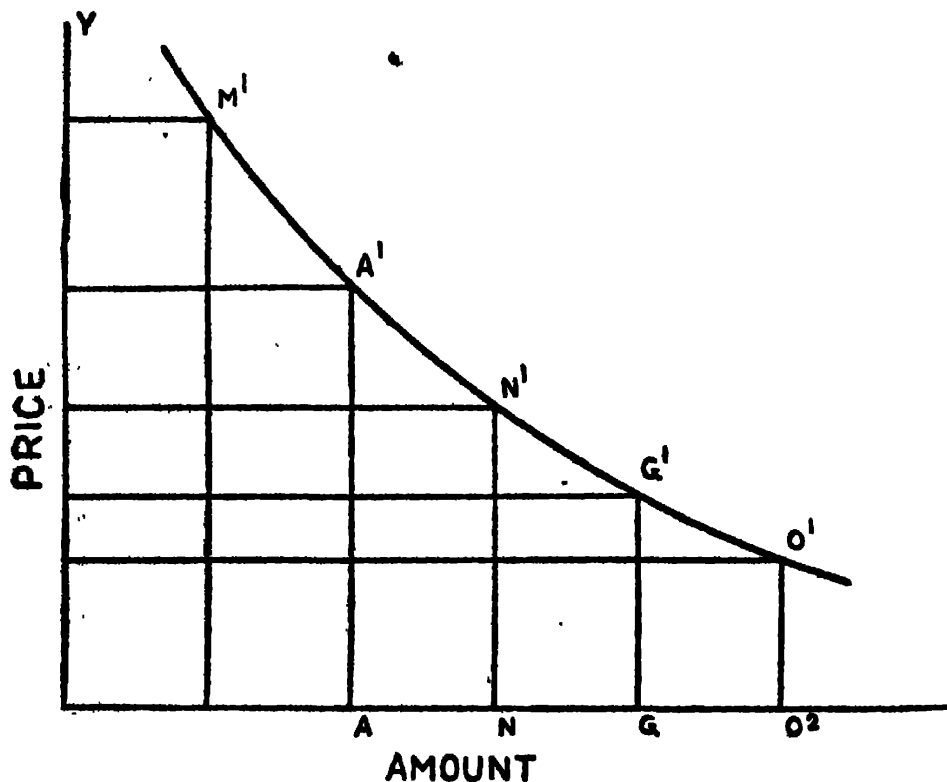


Fig. 2

price is  $NN^1$ , still more is demanded, viz.,  $ON$  units and the tendency to buy more continues with every fall in the price. Now the curve we get by joining  $M^1 A^1 N^1 G^1 O^1$  is known as the Demand Curve, which like the demand schedule illustrates the individual's reactions to price changes.

We, however, should do well to remember the assumptions we have tacitly made in making the schedule or drawing the curve. For, without these assumptions neither will have the merits claimed for them.

We have assumed, for instance, that the individual's money income remains unchanged; his tastes and habits also do not alter; the prices of competing goods, (in our case, say, for

instance, apples, oranges, etc.,) also do not change. Evidently, then, if any one of these changes, then the picture will be a different one and a fresh schedule has to be made and a new curve has to be drawn. But if these remain unchanged and if the consumer does not act 'carelessly,' or 'impulsively' and has a definite scale of preferences, because he has a fixed money income, larger units of a thing will be sold at a lower price. In other words, the demand curve will slope downwards to the right.

**Market Demand Schedule :** Just as we can make an individual's demand schedule, so it is possible to make a schedule indicating the different quantities or the volumes of a thing which will be bought by all the individuals of a community at different prices. This schedule will be the market demand schedule at a given time and in a particular market. In the following schedule on the left side are mentioned the prices of mango and on the right side are mentioned the number of mangoes all the individuals will demand at these different prices. This schedule will be the Market Demand Schedule for mango.

<i>Price of a mango</i>			<i>Number of mangoes demanded</i>
Rs.	As.	P.	
0	8	0	5000
0	6	0	7000
0	4	0	10,000
0	2	0	15,000

This is then the market demand schedule. But we know that the individuals in the market are people who belong to different social status with different economic conditions, different tastes, temperaments and habits. Can this market demand schedule, therefore, be expected to indicate with any amount of accuracy the number of mangoes which the individuals who comprise the market will really buy at these different prices? It is, of course, undeniable that there is a bewildering variety of tastes and habits of the individuals who constitute



the market. Their money incomes are also different and this presents another difficulty. But this is exactly why it is said that the market demand schedule is expected to be more dependable and steady. For, since the market demand schedule is an aggregate of the demand schedules of all the individuals of the market, it is likely that the peculiarities of individual buyers will cancel each other and thus will make the schedule free from the influences of the inconstant and other irregular actions which are likely on the part of the individuals. Market demand curve, if a curve is drawn, therefore, is supposed to be less discontinuous than the individual demand curve.

**Law of Demand :** A study of the demand schedule (p. 45) reveals that more of a commodity will be demanded when the price is low and less of it will be demanded when the price is high. The Law of Demand, therefore, tells us that "the amount demanded increases with a fall in price, and diminishes with a rise in price," which, in other words, means that the "greater the amount to be sold, the smaller must be the price at which it is offered in order that it may find purchasers."

Now, a fall in the price of a commodity leads to an increased demand for it because it may mean either of two things viz.,

(i) that the consumer, because of the fall in the price, is better off than what he was before, and therefore, is in a position to spend the money now made available to him as a result of a fall in the price of the commodity. To take an illustration : If the price of sugar falls from one rupee a seer to annas eight a seer then an individual who was consuming one seer before can now consume two seers since he is now better off by annas eight because of the fall in the price of sugar. Naturally, the consumption of sugar increases. Mr. Hicks calls this 'income effect.'<sup>1</sup>

(ii) Again, a fall in the price of sugar from Re. 1/- to annas -/8/-, may mean that people who were consuming certain amount of 'gur', the price of which has not fallen, will now

<sup>1</sup> Hicks—Value and Capital.

consume more sugar as a consequence of a fall in its price and less 'gur'. That is to say, they will now substitute sugar whose price has fallen for 'gur' whose price has not fallen. Just as in the former case, in this case also more sugar will be consumed because of a fall in its price. This is the 'Substitution effect' according to Mr. Hicks.

**Limitations of the Law of Demand :** The Law of Demand is valid only on certain assumptions and if these assumptions are absent then the law may not hold good.\* The conditions, are the following :

(i) that the tastes of the consumers remain unchanged. Supposing they develop a liking for 'gur', then even a fall in the price of sugar may not be followed by an increased sale ;

(ii) that the money incomes of the consumers remain unaltered. In case the incomes fall, in our example, then in all probability less sugar will be consumed notwithstanding a fall in its price ;

(iii) that the prices of the substitutes remain also unchanged. That is, in our illustration the price of 'gur' does not change. In other words, if the price of 'gur' also falls, men may not increase their consumption of sugar following a fall in its price.

A rise in price again, may be followed in certain cases, not by a fall in the demand of the commodity as the Law of Demand states, but by a still more rise in the demand. Take for instance, the price of rare and precious jewels. If their prices rise, it is possible that to satisfy their vanity some very rich people may want more of these costly jewels.†

Similarly, if the people apprehend that a rise in the price of a commodity will be followed by a further rise in its price,

\* The demand curve instead of sloping downward to the right may in these 'exceptional' cases slope upward.

† A few rich consumers may buy more of these jewels at higher prices but 'as a rule the market demand curve for such goods, representing the combined demand of all consumers, will slope downward.' (Benham—Economics p. 47).

then, instead of buying less they may be eager to buy more even at the higher price.

There are again certain commodities like rice, dal, atta, etc. on which the comparatively poor consumers having limited money incomes, usually spend a large part of their incomes. Now, in case of a rise in the price of these foodstuffs, these consumers may have to forego consumption of other things and may be constrained to spend even a larger part of their incomes on these articles than before in order to satisfy their hunger first.

In these cases, the demand curve, which is supposed to be sloping downward to the right, may, instead slope upward. These are as Benham calls them 'exceptional' demand curves. Of course, no demand curve can slope upward all the way, for, that would mean that the amount of money spent on the commodity would be greater, approaching infinity, if its price were higher.

**Elasticity of Demand :** Demand, we know, responds to changes in prices. That is, if the price of a commodity changes then the amount of it which will be demanded will also change ; more will be bought when the price falls and less will be bought when the price rises. But how much more or less of a commodity will be bought when its price falls a little or rises slightly can be known, under given conditions, if we know the elasticity of demand of the commodity. The concept of elasticity helps us in measuring the rate at which demand responds to changes in price.

Elasticity of demand, therefore, refers, other things remaining equal, to the rate at which the amount of the commodity bought changes as a result of changes in its price.

Now, different commodities have different elasticity of demand. That is, the rate at which the demand will respond to changes in price, is different for different commodities. For instance, a small rise or fall in the price of some commodities may lead to a considerable decrease or increase in their demand.

Demand, in these cases, is said to be elastic, *e.g.*, demand for any luxury article. Again, there are some commodities whose demand may remain more or less the same, *i.e.*, unaltered, even when their prices rise or fall a little. Demand, in these cases, is said to be inelastic, *e.g.*, demand for articles like salt, etc., which are considered to be bare necessities.

**How to measure Elasticity ?** Elasticity of demand of a commodity may be measured in two ways ; either by examining the total amount of money spent on a commodity when the price of it rises or falls or by dividing the percentage increase in the amount of the commodity demanded by the percentage fall in the price of it. The first method may be illustrated in the following way :

<i>Price of sugar per seer</i>	<i>Amount demanded</i>	<i>Total outlay</i>	<i>Elasticity of demand.</i>
(I) Rs. 3/-	30 srs.	Rs. 90/-	} = Unity.
„ 2/-	45 „	Rs. 90/-	
(II) Rs. 3/-	30 srs.	Rs. 90/-	} Greater
„ 2/-	50 „	Rs. 100/-	
(III) Rs. 3/-	30 srs.	Rs. 90/-	} Less than
„ 2/-	40 „	Rs. 80/-	

The table given above shows that the elasticity is equal to unity, greater than unity, or less than unity according as the total amount spent on the commodity is the same, more or less, in the 1st, 2nd and the 3rd cases respectively.

The other way of measuring the elasticity is by dividing the percentage increase in the amount of the commodity demanded by the percentage fall in the price of it. That is,

$$\text{Elasticity} = \frac{\text{percentage increase in the amount demanded}}{\text{percentage fall in the price.}}$$

As we have seen in the previous case, three possible results may follow, *viz.*, 1 p.c. change in price may result in 1 p.c. change in demand and the ratio will be equal to 1 ; 1 p.c. change in price may result in 2 p.c. change in demand and the ratio will

be equal to 2 ; or thirdly, 1 p.c. change in price may result in  $\frac{1}{2}$  p.c. change in demand, i.e., the ratio will be less than one. Elasticity of demand in the first case is equal to unity ; in the second case greater than unity : in the third case, less than unity.

This concept of elasticity of demand, which is measured by dividing the percentage increase in the amount demanded by the percentage fall in the price of the commodity is known as the 'price-elasticity' of demand. It is the ratio of a percentage change in the amount demanded to a percentage change in the price of the commodity.\*

Elasticity of demand, may, therefore, be equal to, greater or less than unity as we have seen above. We may, however, envisage two other extreme cases, viz., when the elasticity is equal to zero or absolutely inelastic demand, which in other words, means that people buy the same amount of the commodity irrespective of the price (they cannot do without any of the amount which they usually buy). Secondly, elasticity is equal to infinity or infinitely elastic demand, which in other words, means, that the people refuse to buy the commodity altogether when its price rises a little.

The demand curves in the following figures (p. 53) may help in understanding the concept of elasticity. In each figure, along the vertical axis OY is measured the price, and along the horizontal axis OX is measured the quantity purchased. DD is the demand curve.

\* As we shall see later, improved technical knowledge may increase people's real income. It is, however, hardly likely that the people will spend the increased income (even if it be proportionately shared by them) exactly proportionately on different commodities. Rather, they will spend more, on say, comforts, luxuries, etc., and proportionately less on say, rent, ordinary food etc. That is to say, the demand for these articles becomes elastic in the sense that they respond to changes in their money incomes. That is why this is known as 'income elasticity' of demand. Income elasticity, therefore, may be measured by dividing the percentage increase in the amount demanded by the percentage increase in a man's income. The concept of income elasticity of demand is helpful in studying the effects of fluctuations in income on prices or on the volume of production of different commodities.

Demand, as it is shown in the figures given below, is absolutely inelastic in Fig. 3, infinitely elastic in Fig. 4, it is inelastic

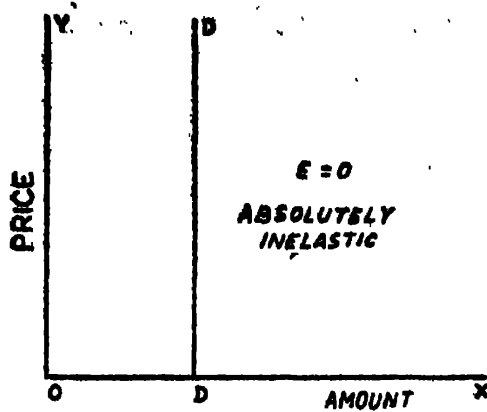


Fig. 3

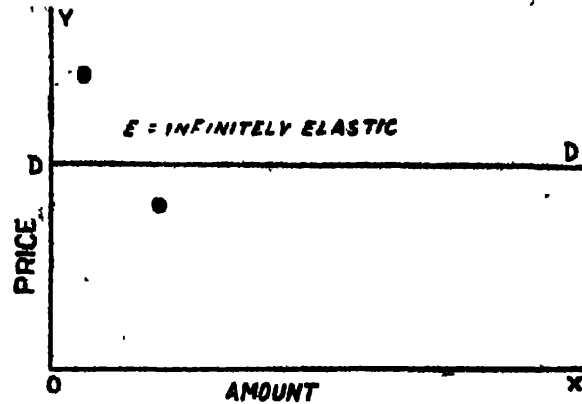


Fig. 4

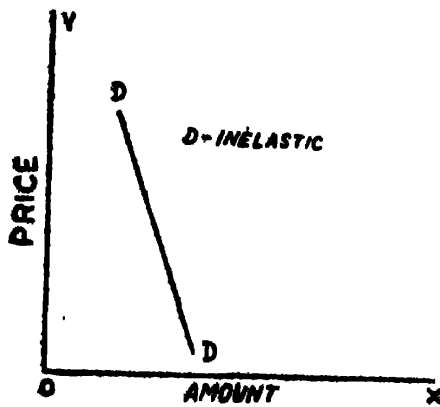


Fig. 5

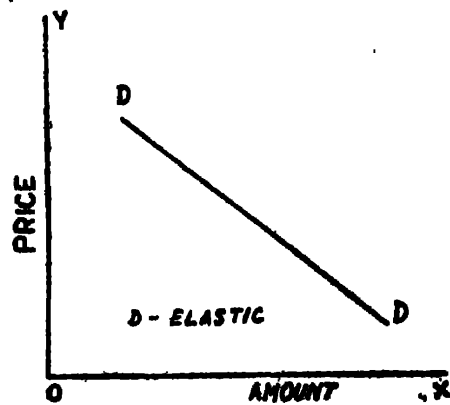


Fig. 6

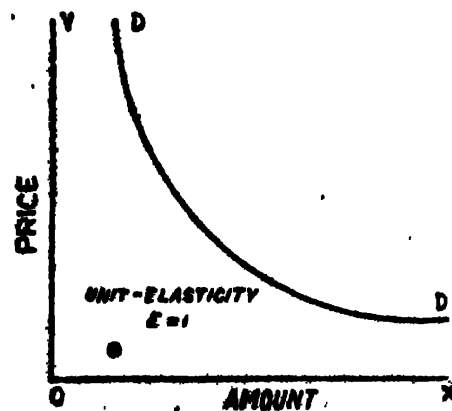


Fig. 7

in Fig. 5, elastic in Fig. 6, and is equal to unity, (i.e., unit elasticity) in Fig. 7.

**Conditions which govern the Elasticity of Demand :** Elasticity of demand, that is, the rate at which the demand responds to price changes is different in case of different commodities. Take for instance, toilet soap and salt, assuming the first to be a luxury for most of the people in India and the second a bare necessity. It is likely that considerably more or less people will use soap if its price falls or rises a little. The demand for soap is, therefore, elastic in India. But in the case of salt, people usually consume it because they have to consume a certain amount of salt irrespective of its price. Demand in the case of salt, therefore, is inelastic. Elasticity thus depends upon the nature of the commodity.

Take again, the case of such articles as coal, electricity etc., that is, those which can be put to a variety of uses. The idea is, if the price of any of these articles rises, then people will reduce their consumption by restricting its uses to the most urgent purposes ; and if the price falls, its uses will be extended to different purposes which were considered less urgent when the price was high. Demand for those commodities which can be put to various uses is therefore elastic.

Commodities which have close substitutes are very elastic in demand. Assuming gur to be such a substitute for sugar, if the price of sugar rises, relatively to the price of gur, a considerably large number of people in India may consume gur instead of sugar.

Elasticity of demand of commodities also depends on the prices of the commodities and the money incomes of the consumers. Demand for those articles the prices of which are very low and the expenditure on which constitutes a very small portion of the total expenditure of the consumer, is very inelastic, *e.g.*, salt etc. A little change in the price of salt will not induce people to consume either more or less of salt. Nor will the people look for substitutes for, since they spend only a small portion of their incomes on these articles, the little extra expenditure which they may have to incur in case of a rise in their prices may be ignored by them.

There are, again, certain articles which are usually consumed by the very rich people who can afford to ignore any change in the prices of these articles. That is, the amount which they have to spend more or which they can save if the prices of these articles rise or fall slightly, is of little importance to them. Demand for these articles, therefore, is less elastic to the rich people. Generally speaking, people who can ignore price changes, because they have sufficient means, have less elastic demand than those who with limited means, have to think twice before spending a rupee. This, in other words, means that elasticity is relative to a particular income group. It is possible that the elasticity of demand for the same article will be zero for the very poor, considerable for the middle class people and low for the rich people. Elasticity of demand for luxury goods, for instance, illustrates this point. That is, those who are very rich or very poor are not concerned with the price changes of these articles, while the middle class people mostly increase or decrease their volume of purchases if the prices of these articles fall or rise. Fine dhoti may be said to be such an article in India.

Evidently, then, while we speak of elasticity of demand of any commodity, we refer to a specific point in the demand curve and a commodity, again, under different conditions, may have different elasticity of demand.

Let us now briefly discuss the position of the demand curve when the people's real income increases and therefore, the total demand becomes more, without a fall in the price of the commodity.

So long, we had in mind the statical demand curve which necessarily slopes downward to the right as a result of the increased demand consequent on a fall in the price of the commodity. The position of the demand curve, however, will be materially different if we take into consideration the influence of those dynamic factors which are real and found in actual life. These factors are, for instance, a change in population,



technical improvement due to improved technical knowledge, etc. .

Demand, in actual life, where dynamic forces are in operation, however, increases even without a fall in the price of the commodity. For instance, increased population will mean increased demand. Similarly, a change in the taste of the people, technical improvements or better distribution of income which may mean transfer of purchasing power to lower income groups, increase in the money income of the people resulting in the increased 'propensity to consume', etc., will automatically increase the total demand.

Increased demand now will mean a different position of the demand curve, viz., the curve itself will now move to a higher position. The following figure illustrates the point.

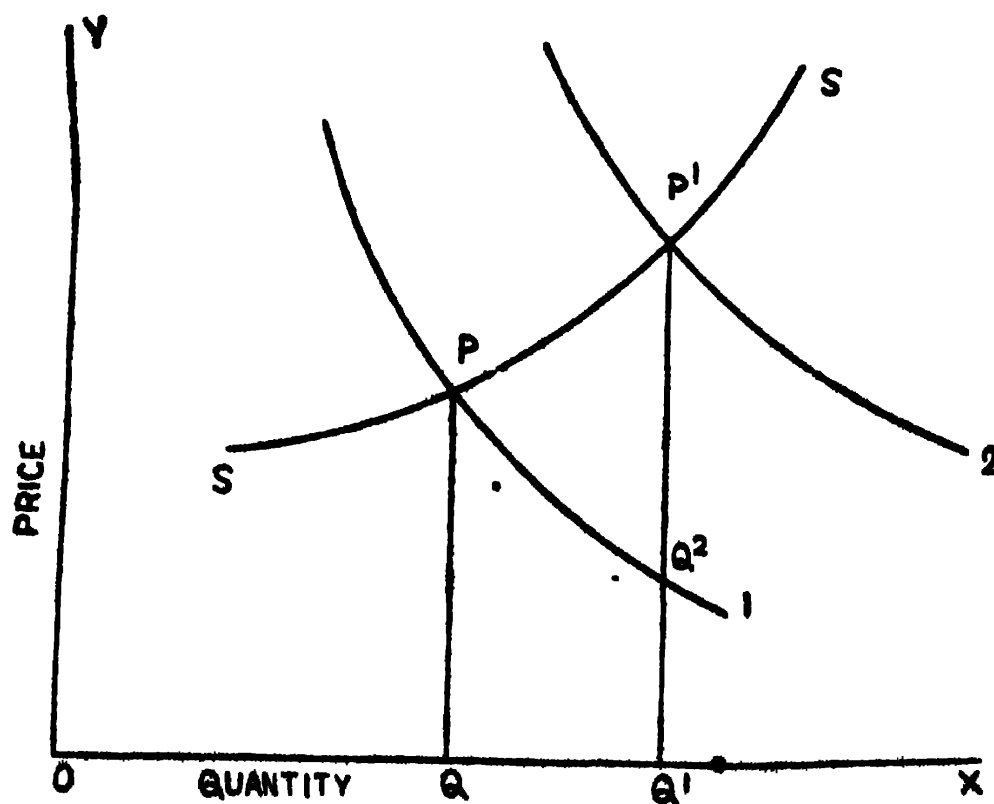


Fig. 8

In Fig. 8 an increase in demand will mean that the curve No. 1 will be shifted to a new position, indicated by the curve

No. 2. It is clear that although the price has risen from  $QP$  to  $Q^1P^1$ , the quantity demanded has increased from  $OQ$  to  $OQ^1$ .

In the statical sense, i.e., assuming no change in any condition,  $OQ^1$  amount could only be demanded if the price declined from  $QP$  to  $Q^1Q^2$ .

**Consumer's Surplus :** Does the price, it may be asked, which we actually pay for a thing represent the satisfaction we obtain from its possession? Generally speaking, it does not. For, there always exists a difference between what we actually pay for a thing and the maximum amount that we would be prepared to pay than go without the thing altogether. This difference, which, in other words, is a surplus satisfaction we obtain by buying anything is the economic measure of the surplus of the consumer or the consumer's surplus.

The price which a person pays for a thing, says Marshall, "can never exceed, and seldom comes up to that which he would be willing to pay rather than go without it; so that the gratification which he gets from its purchase generally exceeds that which he gives up in paying away its price; and he thus derives from the purchase a surplus of satisfaction."<sup>1</sup> This excess of the price which the buyer would be prepared to pay rather than go without the thing over that which he actually pays is the consumer's surplus he derives from the purchase.

The doctrine of consumers surplus is a deduction from the Law of Diminishing Utility which states that the more of a thing a man has the less he wants more of it and therefore, with every increase of his stock of the commodity he will offer lower and lower price for the additional units. Take an illustration. Suppose that a man is very hungry and therefore, is willing to pay even Re. 1/- for a cake because he expects satisfaction from it worth Re. 1/-. But it is likely that the same man will buy the 2nd, 3rd or 4th cake if the prices were As. /12/-, -/8/- and -/4/- respectively, because the satisfaction he expects from these

<sup>1</sup> Marshall—Economics of Industry p. 79.

successive units gradually becomes less and less. Supposing the actual price in the market per cake is annas four only and hence, for the 4 cakes the man purchases, he pays only  $4 \times 4$  annas, i.e., Rs. 1/-. But as we have seen the total price he was willing to pay is equal to Rs. 1/- + -/12/-, + -/8/-, + -/4/-, i.e., Rs. 2/8/-. Evidently, therefore, from his purchase of 4 cakes he obtains an additional satisfaction of worth Rs. 1/8/- (Rs. 2/8/- - 1/- = Rs. 1/8/-). Consumer's surplus is thus the surplus which a consumer enjoys on his 'intra-marginal' purchases.

In the words of Marshall, this surplus satisfaction or benefit which we get from buying at a low price things for which we would be prepared to pay a very high price than go without, depends on environment or conjecture.

In our illustration, the man therefore, derives the surplus satisfaction of Re. 1/8/- from what Marshall says his 'conjecture' that is, 'from the adaptation of the environment' to his wants in the particular matter of cake. If the adaptation ceased and cakes could not be obtained at any price then the man would have suffered a loss of satisfaction at least equal to that which he could have got by spending Re. 1/8/- more on various other things.

The doctrine of consumer's surplus may be illustrated with the help of a diagram in the following way.

In Fig. 9 (p. 59) the price is measured along OY and the quantity is measured along OX axis. Our hungry man, let us suppose, was prepared to pay  $CC^1$  price for the OC amount since he expected from it  $OCC^1P$  amount of satisfaction; similarly, he was prepared to pay for the other units, viz., CA, AK, and KE,  $AA^1$ ,  $KK^1$  and  $EE^1$  prices respectively, for in these cases the amount of satisfaction he expected was becoming gradually less and less, viz.,  $CA A^1C^1$ ,  $AK K^1A^1$  and  $KE E^1K^1$ . Since he has purchased 4 cakes, paying for each a price equal to  $EE^1$ , the total sum he has spent on 4 cakes is equal to  $OE E^1P^1$ . The dot-

ted area  $P^1E^1C^1P$ , therefore, is the surplus amount of satisfaction the man derives from his purchase of 4 cakes.

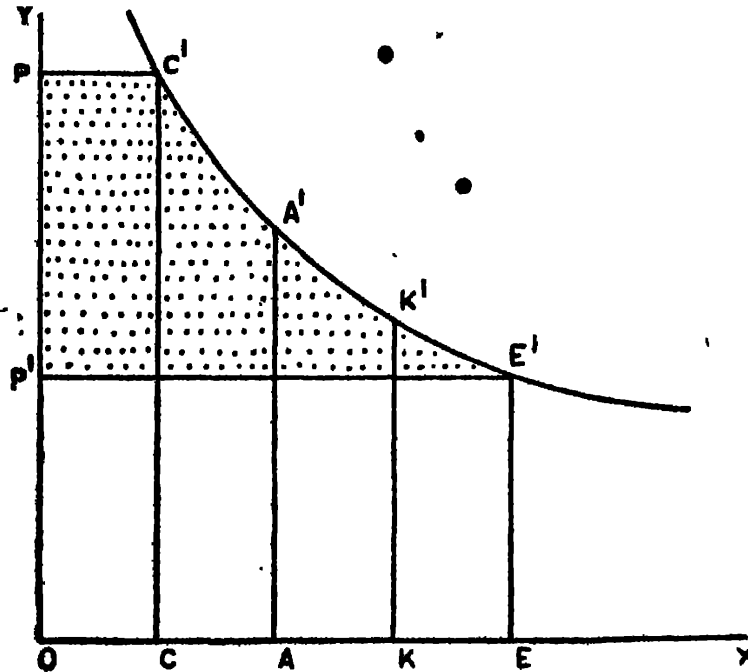


Fig. 9

**How to measure the Consumer's Surplus in a market?** The individuals who comprise a market have a bewildering variety of tastes, sensibilities, temperaments etc., and their money incomes are also different. It is, therefore, natural that the same sum of money which may be spent in purchasing an article, will yield different amount of satisfaction to different persons, i.e., it will yield different consumer's surplus to different persons. It is, therefore, a very difficult task to measure the consumer's surplus in a market. But as suggested by Marshall, if the fact that the same sum of money represents different amounts of satisfaction to different people could be ignored, then, we might measure the surplus satisfaction which the sale of a commodity affords to a market, by the aggregate of the sums by which the prices shown in a complete list of demand prices for the commodity, exceeds its selling price. (In a large market, differences in tastes, temperaments etc., are likely to cancel each other since we will take into account the cases of a large number of individuals).

**The Problem of measuring the Consumer's Surplus :** The doctrine of consumer's surplus is a deduction from the Law of Diminishing Utility and we have seen how the Law of Diminishing Utility suffers from some serious limitations because of the difficulties of measuring the utility a person derives from possessing or consuming a thing. The task of measuring the consumer's surplus is, therefore, a difficult task. In the following paragraphs we have examined some of these difficulties and the remedies which have been suggested.

Consumer's surplus, we are told, is the excess of satisfaction which the consumer gets from his purchase of a thing over that which he foregoes in paying the price for it. But, can we, it may be asked, with any amount of accuracy say what price would be offered for the thing, if that were the only one in the market ? Or, even if there were more, what prices would a man offer for each of the units if they were offered one after another ? The truth is that our answer would be a mere guess work. For we only know the customary price and the changes in the neighbourhood of the range with which we are familiar. But we have no idea as to what the demand prices for a thing would be if the amounts offered for sale were very different from those which are commonly sold.

"Our list of demand prices" Marshall himself says "is therefore highly conjectural except in the neighbourhood of the customary price ; and the best estimates we can form of the whole amount of utility of anything are liable to large error."<sup>1</sup>

This is, however, not a very serious difficulty for 'the chief applications of the doctrine of consumer's surplus are concerned with such changes in it as would accompany changes in the price of the commodity in question in the neighbourhood of the customary price' and with which, therefore, we are familiar.

Secondly, take the case of say, sugar and gur, assuming one is a close substitute for the other. Measuring the consumer's surplus of these 'rival' commodities presents some difficulties. If

<sup>1</sup> Marshall—Economics of Industry, p. 424.

of course, sugar were not available, people would increase their consumption of gur. True, non-availability of sugar will mean a definite loss of satisfaction for them ; but it is also true that if neither sugar nor gur were available, then their loss would be still greater simply because in that case they would not be able to take to gur either. Hence, the total utility of both sugar and gur is greater than the sum of the total utility of sugar and the total utility of gur, calculated on the supposition that when one is not available the other is available, and therefore, people can have recourse to that. It is, therefore, obvious that even if the total utility derived from both sugar and gur be added together, that would not be an accurate measurement of the total amount of satisfaction from their consumption. How are we then to measure the consumer's surplus of these 'rival' commodities ? In order to avoid this difficulty, Marshall suggests that such 'rival' commodities should be grouped together as one commodity under a common demand schedule.

Take again the cases of the articles which either (i) have great prestige value *e.g.*, precious stones or (ii) are bare necessities of life *e.g.*, food for sustenance. In the first case, they are evidences of wealth and social distinction, their prestige value, therefore will fall if their prices fall. Naturally, therefore, a fall in the price of these articles will not yield more consumer's surplus though their intrinsic qualities may remain as before. Instead, the surplus may altogether disappear.

In the second case, while ordinarily we do not consciously feel the satisfaction they yield yet their utility is infinite. One may be, for instance, prepared to part with all he possesses for these things. This is true also in cases of conventional necessities.

Consumer's surplus therefore is unsubstantial and indefinite in these cases.

It is interesting to discuss in this connection the distinc-

tion made by Prof. Patten between 'pain economy' and 'pleasure economy.' By 'pain economy' he meant that stage when consumption is restricted to the indispensable minimum, that is, when one consumes not for any positive satisfaction but only to 'ward off pain.' It is extremely painful to forego consumption of these articles, *i.e.*, the bare necessities. 'Pleasure economy' refers to that stage when consumption yields positive satisfaction. This comes after the first stage, that is, when man's primary or elemental wants have been satisfied and therefore there is scope for choice in the 'direction of expenditure.' Consumer's surplus can be measured while the second stage is reached. In other words, we cannot measure consumer's surplus of commodities yielding 'pain economy', *e.g.*, bare necessities, but the consumer's surplus of articles yielding 'pleasure economy', *e.g.*, attractive attire etc. can be measured.

Consumer's surplus, it is said, can hardly be measured with any amount of accuracy since we know, that as a man's stock of a thing goes on increasing his utility for the earlier purchases gradually diminishes. That is to say, as a man buys more and more of a thing the urgency of need of earlier units diminishes and, therefore, the utility he derives from those units, *i.e.*, which he has bought earlier becomes less and less. With the increase of the stock of a thing, therefore, the buyer's demand prices for the earlier units fall since they gradually yield less and less satisfaction. This, therefore, necessitates redrawing of the earlier parts of our list of demand prices continuously at a lower level, as we pass along it towards lower prices, *i.e.*, redrawing of the demand curve at a lower level as we pass along it to the right.

This argument, however, 'misconceives the plan' according to which the list of the demand prices is made. For, it must be remembered, that the price we set against different units while we draw the demand schedule represents the additional utility of additional units and not the average utility of the units purchased. The difficulty of continuously redrawing the earlier parts of the demand curve, therefore, does not arise. The objection would, of course, be valid if the demand price set

against each different unit represented the average utility of the units. Let us take the illustration of the hungry man eating the cakes. The utility of the first cake to him is worth Re. 1/- ; of the second cake annas -/12/-. The average utility of the two cakes to him therefore will be -/14/-. Similarly, while he buys the 3rd and the 4th cake, the average utility becomes -/12/- and -/10/- respectively. Evidently, therefore, if the demand curve measured the average utility of the cakes then we would have to redraw it as the man went on buying more and more of cakes since in that case the average utility of the earlier units would surely fall. But the list of demand prices represents not the average utility but the additional utility of the additional units viz., the utility of the second cake is the utility that the man derives in addition to the first unit and this is measured by the price set against it in the list, that is, annas twelve. Similarly, the purchase of the subsequent units, therefore, does not affect the utility of the units purchased earlier. The objection, therefore, is not valid since it misconceives the plan according to which the list of the prices is made out.

Lastly, it is pointed out that the doctrine of consumer's surplus makes an unreal assumption, namely, that the marginal utility of money is constant, that is, spending of more money or less does not affect the marginal utility of money. We cannot deny that the more a man spends on any thing the less power he has to buy more. Marginal utility of money to him, therefore, increases with every fresh expenditure he incurs. Specially, when we have to spend a large share of our limited income on some commodity, an increase or decrease of expenditure will certainly alter the marginal utility of money and hence vitiate our conclusion arrived at on the assumption that the marginal utility of money does not change.

This difficulty can be avoided if, as Hicks suggests, by consumer's surplus we mean a gain which accrues to the consumer in terms of money income consequent on a fall in the price of a thing, the loss of which would only offset the fall in the price



and leave the consumer neither better off nor worse off than before. To take an illustration: Suppose, Mr. A purchases 12 cakes, when the price of the cake is annas 4 each. Suppose, again, that when the price falls to say, annas 3, he also purchases the same amount, that is, 12 cakes. But since the price of cake has now fallen from annas four to annas three, Mr. A will now have an additional annas twelve which he can spend on any other articles he wants to buy. The income of Mr. A has now increased by annas twelve. Obviously, the surplus satisfaction, i.e., the consumer's surplus enjoyed by Mr. A will, in any case, not be less than annas twelve. The loss of this twelve annas would only offset the gain obtained by a fall in the price of cake and the position of Mr. A will neither be better off nor worse off than what it was before. This, in other words, means that if the price of cakes declined from annas 4 to annas 3 and the income of Mr. A fell from Rs. 3/- to Rs. 2/4/-, then he could buy a dozen cakes as before, that is, he would not be any the worse off because of a fall in this income.

**The Doctrine of Consumer's Surplus: Its Utility:** Economic science observes Marshall himself has very little to say as to how far the price we pay for a thing represents the satisfaction we derive from its possession. But "that little" adds he again, 'is of some importance' and the notion of consumer's surplus according to him is of great importance for the higher work of the economic students. We will, therefore, not do justice to the great thinker who introduced the concept of consumer's surplus in economics if we, because of the difficulties of measuring it, discard the concept as 'unsubstantial' or 'unreal'. Instead, the doctrine is extremely useful in more than one ways as will appear from the following discussion.

The price we pay for a thing, may not accurately measure the satisfaction we derive from it. But the doctrine of consumer's surplus has the great merit of focussing our attention to the important fact that we derive infinite satisfaction from certain articles of daily use *e.g.*, salt etc. although the price we

pay for them may be very low while the consumer's surplus of some articles which we hold in much esteem and therefore, which command very high prices *e.g.*, precious stone may at times be nil or at least much less than that we derive from the above articles. Therefore, however inaccurate in measuring the satisfaction we derive by paying a certain amount of money for a thing the doctrine is useful in so far as it helps us to understand the difference which exists in cases of certain commodities between their value in use and their exchange value.

'Of what avail' asked Prof. Nicholson, according to whom the doctrine of consumer's surplus is purely hypothetical and arbitrary, 'is it to say that the utility of an income of say £100, a year is worth say £1,000 a year?' Evidently, he had great doubts about the utility of the doctrine. But as we have known the doctrine aids us in making estimates of the benefits we derive from our environment or as it is said from our 'conjuncture.' It is, therefore, helpful in making comparisons of conditions which obtain in different countries or in the same country at different periods. Prof. Marshall's reply in this connection to Prof. Nicholson which we are quoting below is significant and interesting. "There would be no avail in saying that," observes Marshall, but, he adds, "there might be use, when comparing life in Central Africa with life in England, in saying that, though the things which money will buy in Central Africa may on the average be as cheap there as here, yet there are so many things which can not be bought there at all, that a person with a thousand a year there is not so well off as a person with three or four hundred a year here".<sup>1</sup>

Similarly, the doctrine helps us in making comparisons of the benefits derived in two different periods. Supposing for

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<sup>1</sup> Marshall gives us the following illustration. "If a man pays 1d toll on a bridge, which saves him an additional drive that would cost a shilling, we do not say that the penny is worth a shilling, but that the penny together with the advantage offered him by the bridge (the part it plays in his conjuncture) is worth a shilling for that day. Were the bridge swept away on a day on which he needed it, he would be in at least as bad a position as if he had been deprived of eleven pence." (Marshall—Economics of Industry, p. 422a).

instance that we want to compare the conditions of the labourers of India to-day, with those which existed say 50 years before, then we have to take into account the consumer's surplus the labourers enjoy now and which they used to do then. For, other things remaining equal, the greater the consumer's surplus enjoyed by them, the better is their economic condition.

It is again difficult, if not impossible, on the part of Public authorities to ignore the importance of the concept of consumer's surplus while, for instance, they decide to impose a new tax or to grant a bounty. Either will change the prices and therefore, alter the consumer's surplus of the articles whose prices will be altered by these decisions.

. When we shall study Production, we shall see that (i) there are some commodities the production of which obeys the law of constant returns, (ii) some the production of which obeys the law of diminishing returns and (iii) some the production of which obeys the law of increasing returns. A tax or a bounty in any case will necessarily alter the prices of the commodities and, therefore, also the amount of consumer's surplus derived from them. Charged with the responsibility of ensuring the maximum social welfare, the Exchequer, either he decides to impose a fresh tax or to grant a bounty,<sup>1</sup> hardly can ignore the effects of his policy on the consumer's surplus, in other words, on the welfare of the people. Briefly speaking, it will go a long way to augment the welfare of the people if tax be imposed on those commodities the production of which obeys the law of diminishing returns and bounty, may be a part of the proceeds of the tax, be given in cases of those commodities the production of which obeys the law of increasing returns.<sup>2</sup>

It is thus clear that the exchequer cannot ignore the importance of the consumer's surplus nor can the monopolist

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<sup>1</sup> A tax is taken as representative of those changes which may cause a general increase and a bounty is taken as representative of those changes which may cause a general diminution in the normal supply price of a commodity.

<sup>2</sup> In the first case, that is, when the commodity is produced under the law of constant returns, imposition of a tax will diminish the consumer's surplus

afford to do it while he fixes the price of his commodity. If he chooses to fix the price at a level which will leave no consumer's surplus then the consumers may be scared away or may

by more than the increased payments to the producer or by more than the gross receipts of the state. "For, on that part of the consumption of the commodity, which is maintained, the consumer loses what the State receives and on that part of the consumption which is destroyed by the rise in price, the consumer's surplus is destroyed and of course there is no payment for it to the producer or to the State." (Marshall—Principles, p. 467).

A bounty on such commodities, on the other hand, will increase consumer's surplus but by less than the bounty itself. "For, on that part of the consumption which existed before the bounty, consumer's surplus is increased by just the amount of the bounty; while on the new consumption that is caused by the bounty, the gain of consumer's surplus is less than the bounty."

In the second case, i.e., when a commodity is produced under the law of diminishing returns imposition of a tax by raising its price and thereby diminishing its consumption will lower the expenses of production of the commodity other than the tax and consequently, the supply price will be raised by something less than the full amount of the tax. Obviously, the consumer's surplus will be less but the gross receipts of the state from the tax may be greater than the loss of the consumer's surplus.

A bounty on such commodities will lead to increased production of these commodities and will extend the margin of production to places in which the costs of production are greater than before and, therefore, will lower the price and increase the consumer's surplus, but less than if bounty were given to a commodity the production of which obeys the law of constant returns. For, while production obeys the law of constant returns increase in the consumer's surplus when bounty is given, will be less than the cost of the bounty but while the production obeys the law of diminishing returns increase in consumer's surplus when bounty is given, will be still less than the cost of the bounty.

In the third case, that is, when production obeys the law of increasing returns, imposition of a tax is more injurious to the consumer (than if levied on one which obeys the law of constant returns) since it will lessen the demand and, therefore, the output also. Consequently, the price may rise by more than the amount of the tax and the consumer's surplus will diminish by more than the total payments which the tax brings in to the exchequer.

A bounty on such commodities, on the other hand, by causing considerable fall in their prices will cause an increase in the consumer's surplus which may exceed the total payments made by the state to the producers in the shape of bounty.

agitate. On the other hand, his profits may be more if larger sales be ensured by lowering the price of the commodity and thereby popularising his commodity. This usually a monopolist will do if he has in view the welfare of the public or if he wants to popularise his commodity. As observes Marshall, "if the monopolist regards a gain to the consumers as of equal importance with an equal gain to himself, his aim will be to produce just that amount of the commodity which will make this total benefit a maximum. But it will seldom happen that the monopolist can and will treat £1 of consumers' surplus as equally desirable with £1 of monopoly revenue." The aim of the monopolist, therefore, will be to fix on that price which will make the compromise benefit as large as possible.<sup>1</sup>

Similarly, while fixing the price at which they will sell their services to the public the state railways and other public businesses, have to do it in such a way that the income of the state is not derived at more than proportionate loss of consumer's surplus to the public.

Consumer's surplus therefore is closely associated with the social welfare of the people. The importance of the concept hardly can be denied in view of the fact that it is inter-mixed with so many problems of economic theory. Non-availability of sufficient statistical materials, of course, limits its practical utility, but in spite of all limitations as will be evident from the above discussion, the importance of the doctrine cannot be minimised.

<sup>1</sup> By total benefit Marshall means the sum of the consumer's surplus which arises from the sale of the commodity at any price and the monopoly revenue derived from it, which is the money measure of the net benefit accruing from the sale of the commodity to the producers and the consumers together. In other words, the total benefit of a monopoly is the sum of the monopoly revenue and consumer's surplus. But if the consumer's surplus be counted at a fraction of its actual value, the sum of the two may be called compromise benefit. (Marshall—Principles).

## CHAPTER 4

### INDIFFERENCE CURVES

**Introduction :** We have known that the consumers are interested not in 'isolated' goods, but in a combination of related goods. Nor do they have absolute preference for any commodity. We have also seen that it is extremely difficult to measure the utility of a thing taken in isolation. The theory of marginal utility has, therefore, been found wanting and has been replaced by what is known as the principle of marginal substitutability. Instead of drawing the marginal utility curves we should, therefore, draw indifference curves to illustrate how different combinations of two commodities on which a consumer can spend his limited income, may be equally preferable to him.

**Illustrations :** Let us suppose that there are two commodities, viz., wheat and rice on which Mr. A, the consumer proposes to spend his limited money income. In figure 10, (p. 70) the amount of rice is measured along the horizontal axis OX and the amount of wheat is measured along the vertical axis OY. The line which joins Y and X is the price line. And Mr. A if he so chooses, can spend his entire income to buy either OX amount of rice or OY amount of wheat. But since he does not have absolute preference for either, he proposes to spend his income to buy both wheat and rice. And by drawing perpendiculars from any point on the price line YX, Mr. A can get any combination on which he can spend his total income. Suppose that perpendiculars are drawn from the points P and Q on YX, the price line. These will show that Mr. A can spend his income to buy either OP<sup>1</sup> amount of rice and OM amount of wheat or OQ<sup>1</sup> amount of rice and ON amount of wheat.

Now, the question before Mr. A is not just to spend his income, but to spend it on a combination of these two articles

which is most preferable to him. We know that while the stock of a commodity one possesses increases his preference for

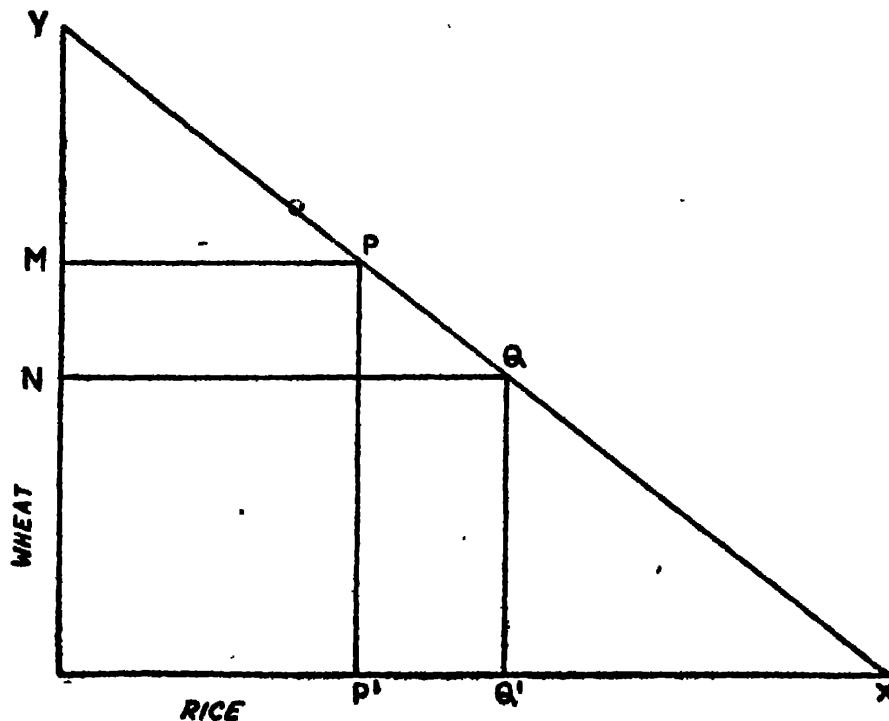


Fig. 10

it decreases. How far it will decrease depends on his scale of relative preferences. Given the scale of preferences of Mr. A therefore we can draw a number of indifference curves to illustrate how different combinations of wheat and rice will be equally preferable to Mr. A and also can show which will be the most preferable combination for him.

In Fig. 11,  $C^1$ ,  $C^2$  and  $C^3$  are three indifference curves. As is seen the curve  $C^2$  is higher than the curve  $C^1$  and the curve  $C^3$  is higher than the curve  $C^2$ . This means that larger quantities of wheat and rice can be obtained by Mr. A if he is in a position to spend more and more money, i.e., if his income is higher and higher. And if Mr. A's income permits he will naturally prefer to have a combination on the highest curve, that is,  $C^3$  than on any combination on the other two, that is,  $C^1$  and  $C^2$ . Now we know that Mr. A's income is limited and therefore it may not allow him to have any combination on the highest

curve, that is,  $C^3$ . So the question is what combination of wheat and rice will be most preferable to Mr. A and on which curve?

In Fig. 11, we see from the curve  $C^1$  that it is open to Mr. A to obtain either  $OR$  amount of rice and  $T'R$  amount of

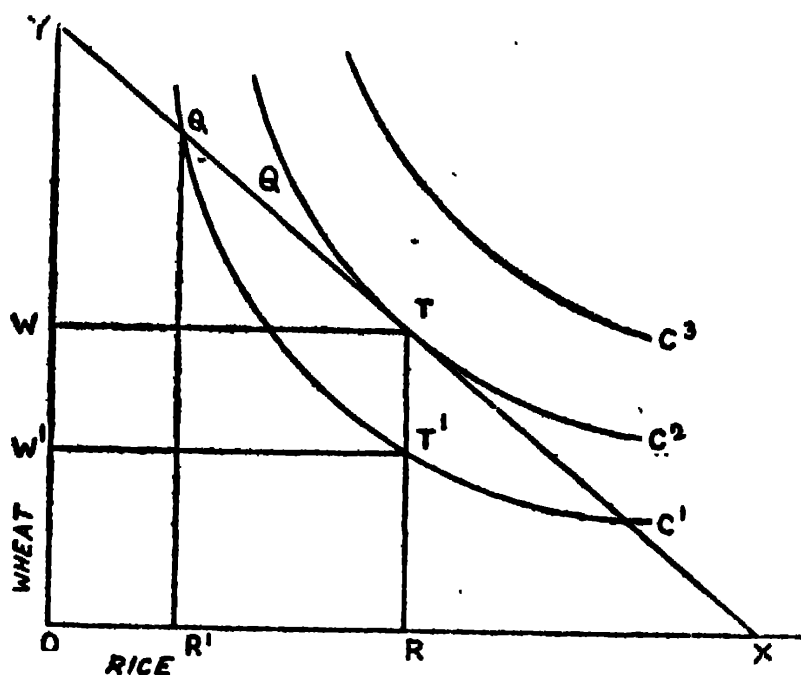


Fig. 11

wheat. Or, he may choose to have  $OR'$  amount of rice and  $QR'$  amount of wheat. But since a combination of larger quantities of wheat and rice is possible on the higher curve  $C^2$ , it is natural that any combination on this curve which touches the price line  $YX$  at  $T$  will be more preferable to Mr. A than any combination of wheat and rice on the lower indifference curve  $C^1$ . That is, Mr. A will prefer more a combination of  $OR$  amount of rice and  $TR$  amount of wheat than the other combinations on the curve  $C^1$  which is lower than the curve  $C^2$ .

Similarly, any combination on  $C^3$ , the highest curve will yield a combination of still larger quantities of wheat and rice and therefore would be still more preferable to Mr. A. But, as we know his money income is limited and therefore he cannot afford to pass on to  $C^3$  which is higher than  $C^2$  and buy a combination of wheat and rice on this curve.



Perpendiculars drawn from the point at which an indifference curve touches the price line therefore will show the most preferable combination of any two commodities (in our case wheat and rice) which an individual can buy with his limited money income. The maximum amount of satisfaction, thus, can be obtained at the point of tangency between the price line and an indifference curve.

*Position of the Curve when either the price of a good changes or when the money income of the consumer changes :*

Demand, we know, responds to changes in the price of a commodity. That is, with their limited incomes consumers will buy more or less of any commodity if the price of it falls

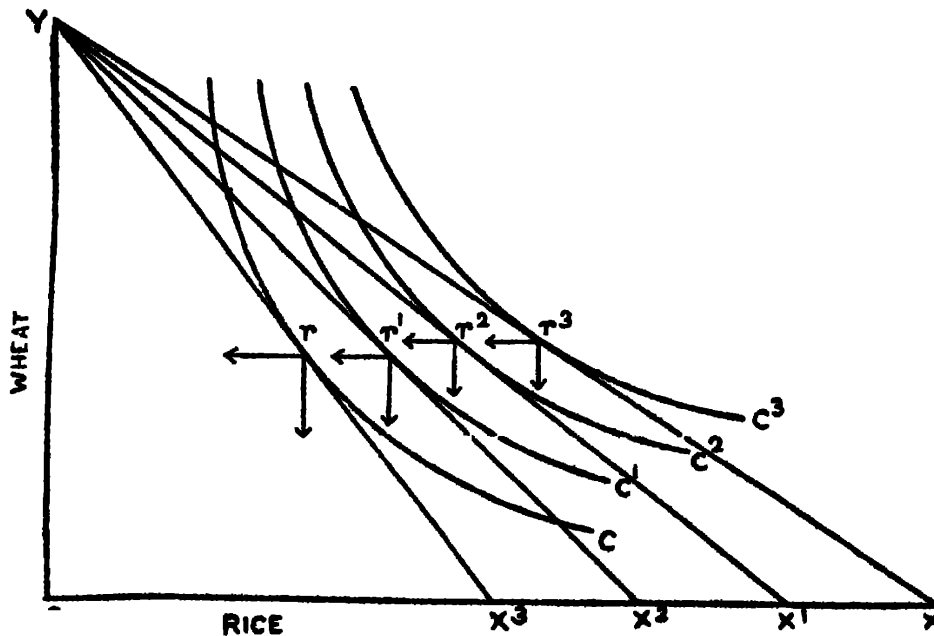


Fig. 12

or rises. In Fig. 12 are shown how Mr. A would react when, say, the price of rice rises and also the positions of the indifference curves.

If the price of rice rises while that of wheat remains unaltered then Mr. A will be in a position to buy the same amount of wheat as before with his income i.e., OY amount but he cannot afford to buy the same amount of rice as he could buy before since its price has risen. Mr. A, therefore,

can afford to buy less and less amount of rice as the price of rice continues to rise. As is illustrated in Fig. 12, instead of buying  $OX$  amount he will gradually buy less and less of rice that is,  $OX^1$   $OX^2$   $OX^3$  quantities as the price rises and the position of the price line will change from  $YX$  to  $YX^1$ ,  $YX^2$ ,  $YX^3$  and perpendiculars drawn on  $OX$  and  $OY$  from  $r^2$ ,  $r^1$ ,  $r$ , that is, the points at which the indifference curves  $C^2$ ,  $C^1$  and  $C$  have touched the price lines  $YX^1$ ,  $YX^2$ ,  $YX^3$ , will indicate the most preferable combinations of rice and wheat which Mr. A can obtain with his limited income at the changed prices of rice.

Similarly, the combinations of rice and wheat which Mr. A will buy will differ if his money income changes while the prices of these commodities remain unaltered.

As is shown in Fig. 12, with his present income the most preferable combination of wheat and rice which Mr. A can buy can be shown by drawing perpendiculars from  $r^3$ , that is, the point at which  $C^3$  touches the price line  $YX$ .

If, however, the money income of Mr. A rises gradually

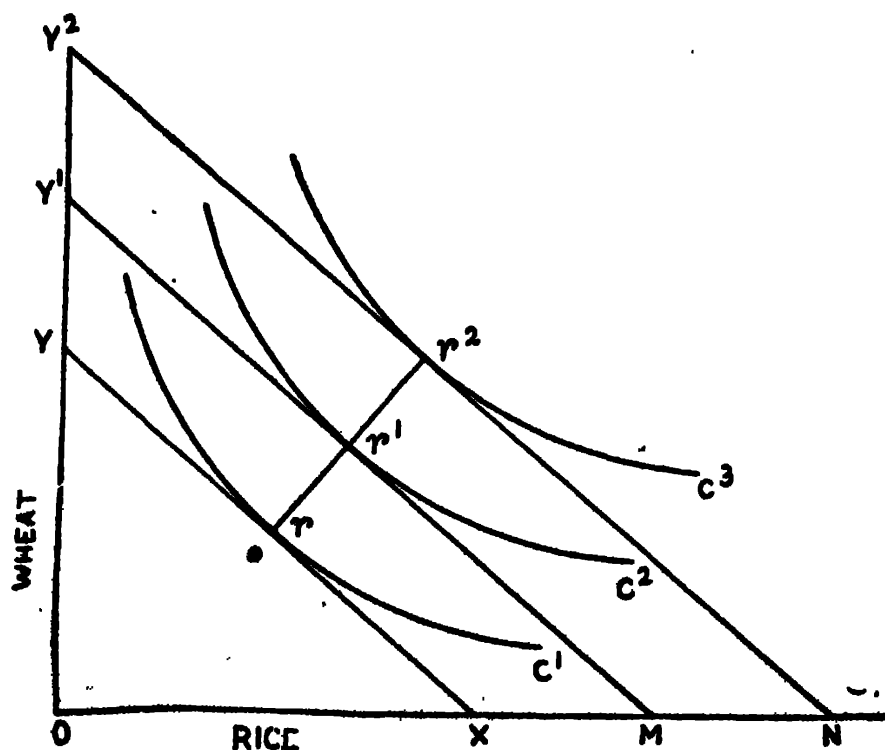


Fig. 12

while the prices of rice and wheat do not change then of course he can increase his purchases of both wheat and rice. This is illustrated in Fig. 13. Mr. A can buy with his increased income OM amount of rice or OY<sup>1</sup> amount of wheat instead of OX amount of rice or OY amount of wheat which he could buy before i.e., before the increase of his income. And if his income increases still more, then he can buy even larger quantities of rice and wheat, that is, he can buy ON amount of rice or OY<sup>2</sup> amount of wheat. That is, as the income increases the price line YX moves to the right to the new positions of Y<sup>1</sup>M, Y<sup>2</sup>N and the points r<sup>1</sup> r<sup>2</sup> at which the higher indifference curves C<sup>2</sup> and C<sup>3</sup> touch the price lines Y<sup>1</sup>M and Y<sup>2</sup>N will indicate the most preferable combinations of rice and wheat for Mr. A at different income levels. If the prices remain unchanged, how the increased income will alter the amount consumed is indicated by the line r, r<sup>1</sup>, r<sup>2</sup>. (This is what Mr. Hicks calls the Income Consumption Curve).

Any change in the price of any commodity we know may have an income effect and a substitution effect. In figures 14

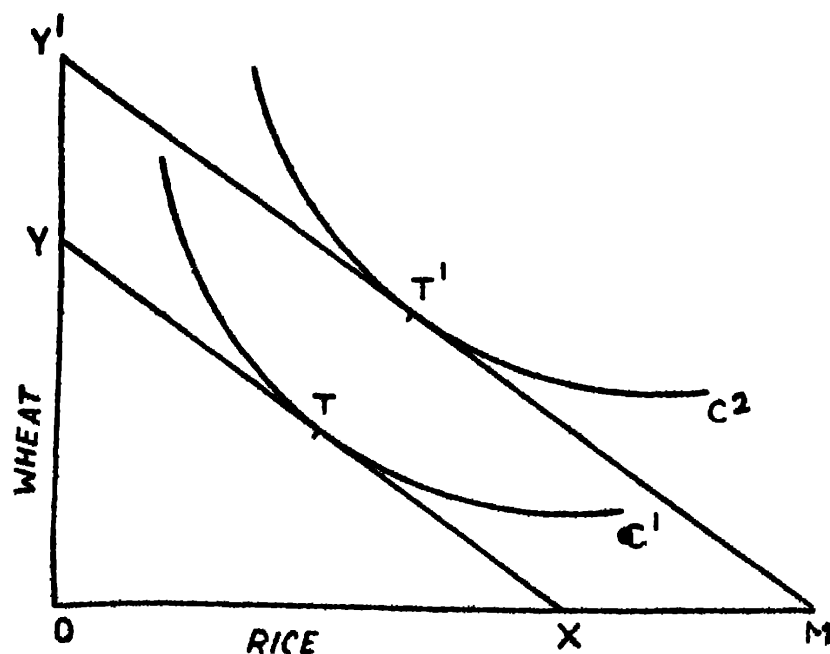


Fig. 14

and 15 are illustrated these effects with the help of diagrams.

The income effect of a fall in the price of a commodity, say, rice in our illustration (price of wheat unaltered) will mean a rise in the income of Mr. A and he will pass on to a point on a higher indifference curve touching the new price line  $Y^1M$ . In Fig. 14, is shown that he moves from  $T$  on curve  $C^1$  to  $T^1$  on  $C^2$  which is higher than  $C^1$ .

The substitution effect of this fall in the price of rice will mean that Mr. A. will be inclined to substitute rice for wheat.

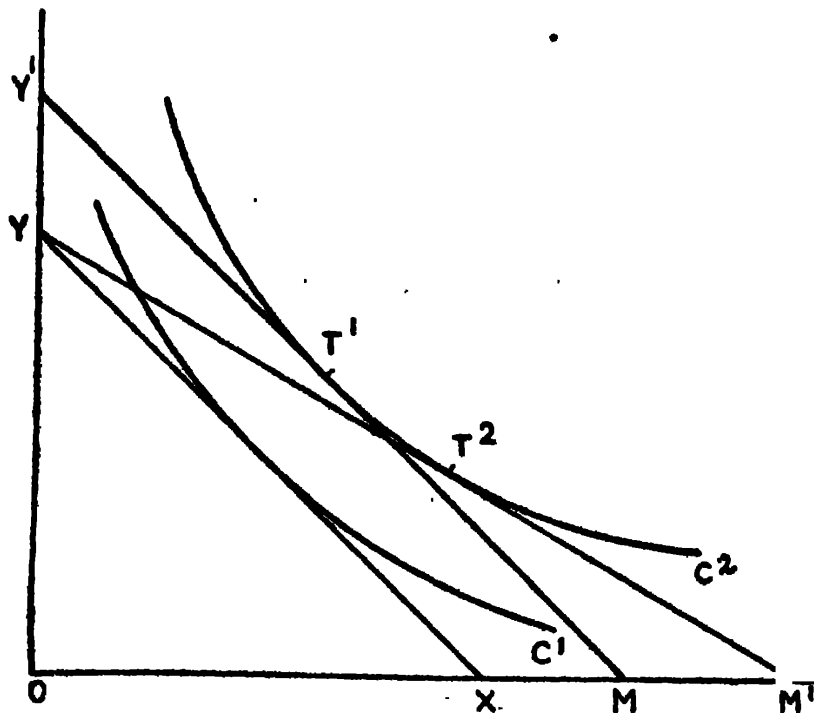


Fig. 15

That is, as is shown Fig. 15 he will move from  $T^1$  to  $T^2$  that is, the point at which the curve  $C^2$  touches the price line  $Y^1M^1$ .

**Conclusion :** Implications of the Theory of Choice can, as we have discussed, be illustrated with the help of indifference curves. But from our analysis it is clear that when a consumer decides to spend his income only on two commodities, his scale of preferences can be illustrated by a series of indifference curves on a two-dimensional diagram measuring two commodities along two axes. But when he chooses to distribute his income on more than two articles say, on three articles, we need three-dimensional diagram and the indifference curve analysis loses

its previous simplicity. And if he decides to spend his income on more than three articles, then the indifference curve analysis does not help us because in that case, that is, for more than three commodities geometry does not help us. If, therefore, the consumer decides to spend his income on more than two articles then it is not possible to show his scale of preference with the help of indifference curve on a two dimensional diagram, for, in that case we would require as many dimensions as the number of articles on which he wants to spend his income. Hicks, however, suggests that when the relative prices of a group of commodities can be assumed to remain unchanged, they can be treated as a single commodity.

Secondly, this indifference curve necessarily slopes downward to the right. And why is it so? This is so, simply because each commodity has a positive marginal utility and a person will naturally prefer a combination of increased amount of any good without any decrease in the amount of the other for this will increase his total utility and so he will, if he can, pass on to an indifference curve which is at a higher level. But if his income does not allow him to pass on to any higher curve and if he has to stay on the same curve, then increased amount of a commodity must necessarily be compensated by decreased amount of the other and this just implies that the indifference curve must slope downward to the right. The marginal rate of substitution of a commodity for another will however determine the nature of the slope of the curve.

The aggregate demand for a commodity of a group of persons in the market is the market demand for the good and while studying demand we have seen that it is possible to have a market demand schedule and also to draw a market demand curve. And any change in the price of a commodity will, as we know, set up an income effect and a substitution effect on its demand. This is true in case of demand of an individual as also in case of market demand. That is, just as an individual will buy more of a good when its price falls so also the group constituting a market will substitute the good whose

price has fallen for that the price of which has not fallen. So the substitution effect of the group will be the same as the individual substitution effect. But it is likely that amongst the members of the group the opinion may differ as regards the quality of the good. That is, some may believe that the good is inferior and, therefore, may buy less while others may hold that it is not so and, therefore, they will increase the amount of their purchase. It is, therefore, difficult to ascertain the income effect of price changes of a good in a market.

The effect on the demand for a commodity from a group of consumers is, therefore, divisible into (i) substitution effect and (ii) income effect. But while something can be said in general about the substitution effect, about the income effect as, says Hicks, nothing in general can be said. Two points, however, may be noted, *viz.*, (a) A fall in the price of any article, in our illustration say, of wheat, will act like a rise in the income of Mr. A and will tend to increase the demand of Mr. A for every good consumed, excepting, however, the goods he considers inferior. And the income effect will generally be small if the proportion of his income which Mr. A spends on it is small. (b) The substitution effect of a fall in the price of wheat will involve a substitution in favour of wheat and naturally, therefore, against some other thing than wheat. If all other commodities as Hicks suggests, be lumped together into a single 'commodity' and the amount of it is measured along the horizontal axis OX in our figures then the substitution effect will tend to diminish the demand for this composite commodity. If, however, they are not taken together then the demand for each one taken separately need not decrease.<sup>1</sup>

<sup>1</sup> Goods, again, may be, as Edgeworth and Pareto held, complementary. It is, therefore, likely that in such cases a fall in the price of one will increase the demand of this as well as that of the other good which is complementary to it and the income effect will be more pronounced than the substitution effect. On the other hand, if they are substitutes, the fall in the price of one will lead to an increased demand for it while the demand for the other will fall.

## **BOOK III**

### **CHAPTER 5**

#### **PRODUCTION**

**What is production in Economics ?** Pick up any man busy at his work. He may be a farmer working in the field, an industrial worker engaged perhaps in doing his bit in making, say, a fountain pen or an electric fan, a truck driver carrying things from one area to another, a trader engaged in supervision of the transport work and finding out by personal enquiry the surplus areas, that is, from where the things would be taken and the deficit areas, that is, where the things would be sent. Each of these workers earns his livelihood by thus working and, therefore, every one can be legitimately said to be engaged in a work which is productive.

Some would, however, suggest that there are some who do not produce anything. For instance, the truck driver or the trader does not produce anything and, therefore, the work in which they are engaged cannot be said to be productive. Such a view, however, is without any scientific foundation. For, if we go deeper into the matter then we will find that none of these workers produces anything since none adds any matter to the already existing matter in the world. New ideas as Marshall observes, may be produced by man in the mental and moral world but it is not within his power to create matter. By his efforts and sacrifices he only succeeds in changing the form or the arrangement of matter to make it more serviceable, that is, more suitable for the satisfaction of human wants. All that a man does in the physical world is that either he so readjusts the existing matter as to make it more useful *e.g.*, when he makes a bench from a log of wood or an earthen pot from clay or, as Marshall says, he puts the matter in the way of being more use-

ful by nature, for example, when he puts seed where the process of nature helps it to burst out into life and come out as a sprout and to become a tree later on.

What, therefore, man creates is not matter but utility or more plainly useful results. And in this sense the work of each of the above workers is as productive as any other's. It is however true that the kind of utility produced by each is not the same. For instance, the industrial worker while at work is changing the arrangement of matter in a piece of celluloid or steel and therefore, the utility he creates is *Form Utility*. The driver while he carries the articles from one place to another is also engaged in productive activity and the utility he adds to the articles by carrying them from the place where they are less wanted to the place where they are more wanted is *Place Utility*. The utility the trader creates is also place utility. A trader again may decide to store a thing (instead of carrying it anywhere) when it is less wanted because it is available in plenty to release at a time when it would be scarce and therefore, would be in great demand. The utility, this act of storing adds to the article, is *Time Utility*.

Thus, there is no essential difference between the activities of these workers. Each is engaged in productive activity since each creates utility, either Form, or Place or Time and thus makes things more useful for the satisfaction of human wants. Production, therefore, in economics does not mean creation of matter, for, man cannot create matter. By production is meant creation of utilities.

**Productive and Unproductive Labour :** Some earlier thinkers took a narrow view and drew a distinction between productive and unproductive labour. The Physiocrats for example of the 18th century regarded agricultural labour (including hunting, fishing) as productive since in agriculture nature works along with man and thus creates a net product. According to them the labour of a trader or a merchant which does not produce such a net product was unproductive.



Adam Smith, however, extended the idea to manufacture and regarded the labour of those engaged in producing material goods as productive. But even according to him the labour of a lawyer or a physician, a musician or an opera dancer was unproductive since the labour of these workers does not produce anything material but 'perishes' in the very instant of its production.

Similarly, the labour of a man engaged in transport work was for a long time not regarded as productive since such labour does not create any net wealth but only deals with those already created.

But man, as we have seen, cannot produce matter, he only makes the matter more useful by re-arranging it and thus creates utility. Hence, there is no reasonable justification in dismissing the labour of all these persons as unproductive since they create nothing material or tangible. Again, how can we regard with consistency the playing of a violin as unproductive while the making of it is to be regarded as productive?

Often a distinction is made between occupations and those occupations are regarded as productive on which we have to depend for our bare necessities while others are regarded as unproductive. And in their zeal to condemn drinking of liquor some would regard distilling as unproductive since they do not approve of drinking liquor. But the economist as we know should not attach any moral significance to the labour of any category of workers. And, therefore, however undesirable may be the consumption of liquor from the social standpoint, he cannot make a distinction between occupations and regard the labour of the distiller or the man engaged in the manufacture of liquor as unproductive. The labour of these workers like the labour of any other is productive since it has utility in the economic sense and, therefore, is paid for. In economics, any labour which yields utility must be regarded as productive. The labour of a distiller or of one producing say quack medicines, therefore, must be regarded as productive since in either

case satisfaction is obtained by those who consume them, *i.e.*, liquor or medicine.

It has been rightly observed that, it is "an abuse of language to call an occupation 'productive' when what we really mean is 'indispensable' ; and it is the language of abuse to call an occupation 'unproductive' when what we really mean is 'sinful in the eyes of true believers'—believers, that is, in the simple life and the virtues of manual labour."

Is there then, the reader may ask, no labour which may be said to be unproductive? Yes, some labour may be said to be unproductive. For example, the labour of those who have failed to promote the aim towards which it was directed is unproductive for it has produced no utility. The labour, for instance, of workers who began to construct a bridge but later on abandon the idea and leave the work unfinished is unproductive. The labour spent in the construction of the part of the bridge which remains unfinished is a complete waste and has not produced any utility. It is therefore unproductive. So, all labour should be regarded as productive except that which fails to promote the aim towards which it is directed and, therefore, which produces no utility.

Again, the labour of a burglar or a pickpocket should not be regarded as productive for they simply try to take away things possessed by others and do not produce any utility.

Finally, it may be asked, how should we regard the exertion a player undergoes while playing a game or of a musician singing for his own pleasure? Such exertions undertaken for their own sake or for the pleasure derived from them are not regarded as labour in economics. For, in economics by labour is meant any exertion either of body or of mind undergone partly or wholly with a view to some good other than the pleasure derived directly from the work.

**Agents or Factors of Production:** It is customary to classify the factors of production under three heads, namely, Land, Labour and Capital. So did also the classical econo-

mists. It is, however, to be noted that the sense in which each of the words is used is different from what is popularly understood by them. Land, for instance, does not mean just the surface of the earth. Instead, it is used to mean the whole of animate and inanimate Nature excluding, of course, man but including "the whole of the materials and the forces, which Nature gives freely for man's aid, in land and water, in air and light and heat." Land, in economics, includes also forests, rivers, mines, sunshine, rain, wind, waterfalls etc. But as an agent of production land exists independently of human effort.

Labour as a factor of production refers to any exertion either of body or of mind undergone by men partly or wholly with a view to some other good than the pleasure derived directly from the work. The exertion, say, of a player while he plays for the pleasure he derives from the game, is not regarded as labour in economics.

Capital as an agent of production may refer to the concrete instruments of production, that is, concrete capital or it may mean the loan or money capital. In the first sense it refers to the stock of assets that has been built up by application of human labour to natural elements in the past, as for example, machinery, buildings etc., which are, therefore, the physical embodiments of past human labour and help further production. In the second sense, capital refers to the money available at any given time for investment in new concrete capital goods.

With the growing specialisation of the processes of production and the complexities of production on a large scale in recent years the need of proper co-ordination of the factors of production in order to avoid waste, reduce the cost and maximise the output, has become all the more urgent and, therefore, Organisation or Enterprise has been added by some writers as the fourth factor of production. This factor is supplied by the entrepreneur on whom rests the responsibility of co-ordinating the factors of production in the most scientific and economical way, of supervising and organising the enterprise as a whole.

This classification of the factors of production, however, has been found unscientific and inadequate by some modern writers. For instance, by labour is meant the effort of every kind of worker, that is, the effort of say, an industrialist or of a surgeon. But we know how different is the labour of an industrialist from the labour of a surgeon. Similarly, there are different gradations of the quality of land. It has, therefore, been rightly pointed out by Benham, that lumping together of all land will create difficulty for us since we know that the productivity of an acre of land, taking the acre as the unit, may differ greatly from another acre. And, hence, it is extremely difficult to say what would happen when additional units of land are cultivated to grow any thing since these additional units may differ from those which were already cultivated.

In the same way there exist innumerable variety and diversity in the nature of equipments, materials and the services they render or perform.

These factors, it is pointed out again, are not as distinct as the classification suggests. Land is a gift of nature and therefore, is said to be distinct from capital which is produced by the efforts of men. But in the short period the supply of capital is also fixed just as the supply of land is fixed. Again, by clearing, fertilizing and other improvements the effective supply of land can be increased just as the supply of capital goods can be increased over a period of time.

Capital, as we have seen, is the physical embodiment of past human labour. How can, then, there exist any fundamental distinction between labour and capital which is nothing but labour 'congealed'? There cannot, therefore, exist any fundamental difference between labour and capital.

Benham, therefore, suggests that the best solution will be to subdivide land, labour and capital and to group together all similar acres of land, all similar workers and goods and to consider each such group as a separate factor of production. For, then each unit of any given factor will be a perfect substitute

for any other unit of that same factor. But as he himself admits, such groupings, however reasonable, will give us a very large number of 'factors'. We should, therefore, for our purpose, classify the factors of production into four *viz.*, Land, Labour, Capital and Organisation or Enterprise which, however, may be reducible into two *i.e.*, Land (Nature) and Labour (Man). For, capital is nothing but a compound of land and labour and Enterprise is nothing but a special form of human labour.

Some would, however, suggest that in production the part played by Nature and capital is passive. Labour, that is, man alone plays an active part. It is, therefore, proper that the entrepreneur should alone be regarded as the positive agent in the production and land, labour and capital are "merely a heterogeneous mass of resources, by means of which he attains certain ends in the most economical manner possible." <sup>1</sup>

**Factors which affect the volume of production :** A community's welfare largely depends on the volume of goods and services it produces. For, the standard of living which in a way is the measure of its welfare depends on the volume of its consumption. And the more a community is in a position to consume, assuming of course, that there is no qualitative deterioration, the higher will be its standard of living. And increased production must precede increased consumption. It is, therefore, necessary to examine the factors which influence the volume of production of a community.

The volume of production of a community, which in other words means the total output of goods and services produced by its members per unit of time, of course, depends on the available factors of production. But it also largely depends on the way in which the resources of the community are utilised. The role of the men who are at the helm of affairs is, therefore, very important and they should do well to remember that to increase the volume of production wastages in all direction must

<sup>1</sup> Briggs and Jordon—Economics.

be avoided. This implies the most economical distribution of the resources of the community. For, maximum production is possible only if the resources are properly distributed. Mal-distribution necessarily entails loss and wastages of the resources of the community, the full utilisation of which, therefore, implies existence of full-employment of labour power of the community. Unemployment, which is a positive social evil, is also an evil from the economic standpoint, for, it is a sure indication of the wastage of the most valuable resource of the community, the human resource. Maximum production is not possible so long as this wastage of human resource is permitted. Again, just as the efficient workers produce more, so increased output is possible if the community is equipped with the best technical knowledge. Without the best technical knowledge the volume of production cannot be maximised. Finally, the social organisation of the community also affects the volume of production just as it is affected by favourable or unfavourable weather, *i.e.*, the volume will be more if the weather is favourable and less if it is unfavourable.

**The Problem of measuring the Volume of Production :** By the volume of production is meant the aggregate of all the goods and services produced by a community in a unit of time, generally, a year. The problem of measuring this volume is, however, less simple than it appears to be. For, we know, that the variety of goods and services the community produces, is innumerable. To add together this bewilderingly heterogeneous goods and services in order to have a 'statistical total' which can be conveniently used for purposes of comparison of the volume of production of one year with that of others, is, to put mildly, a baffling problem. To avoid this difficulty, however, it has been suggested that the money values of these goods and services should be added together. But even then, difficulties remain. For instance, the prices may not remain stable, they may fluctuate from year to year. It is, therefore, possible that while the actual volume of production may be less in a year, if the prices are high, its money value will be greater. Changes in the types

and qualities of the goods due to the changes in the tastes and habits of the people will also create further difficulties. The difficulties arising from the changes in prices, however, can be overcome if the volume of production of any year is valued at the prices prevailing in a year which may be chosen as the base year and then comparison is made.

There are, again, certain services which are performed freely, that is, no money payments are made for these services. For example, while we ourselves wash the utensils we use. No account can be taken of these services. Similarly, the benefit we derive say, from the dress we put on, should be excluded.

Again, the materials used in the production of any commodity, we know pass through a series of stages in the process of production before the commodity comes out as a finished good ready for the consumers. Take, for instance, a leather suitcase. A certain amount of leather and various other materials are necessary for its production. But while calculating the volume of output, we must be careful not to take into account the values of these materials as well as the value of the suitcase. If we do so, obviously then we will commit an error—an error of double counting and the calculation will be grossly inaccurate. In taking account of the goods and services, therefore, we should proceed with caution, because there are chances of double counting which must be avoided to ensure correct estimation of the volume of output of any year.

One thing more. Machines, buildings, plants etc., which are used in the production of goods naturally wear out or depreciate or are damaged as they are used. Thus there occurs a loss of capital, (that is, the stock of capital goods automatically will be less in the end of the year than what it was at the beginning) which unless made up will affect the volume of production in future. It is, therefore, necessary to repair, replace or renew these machines, plants etc., in order to maintain the capital intact. The net volume of output, therefore, is what remains after deduction of the 'depreciation', *i.e.*, after deduction

of a certain percentage of the total (gross) output which consists of these replacements, repairs or renewals.

It is, however, difficult to say with any amount of exactitude as to what percentage of the total output will be necessary to maintain capital intact. The idea of a Depreciation or a Replacement Fund is often suggested. That is, a Fund will be created in which will accumulate the value of the annual depreciation of machines or plants etc., so that when completely worn out these may be replaced by new machines and plants by using this Fund. Let us take an illustration. Suppose a machine worth say, Rs. 5,000/- used in the production of a certain commodity is expected to last for 10 years. The value of the annual depreciation of the machine, in this case will be Rs. 500/-. In the Replacement Fund, therefore, will accumulate @ Rs. 500/- every year so that after 10 years a new machine may be bought to replace the old and worn out machine.<sup>1</sup>

We, however, cannot measure the actual annual depreciation of a machine, for, machines do not depreciate at a uniform rate every year. It is likely, that the rate at which they wear out is greater after a few years of their use. An average sum, however, may be earmarked annually as depreciation allowance with a view to replace the machine when it will be totally worn

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<sup>1</sup> Some money need be spent even when a machine is kept idle i.e., not currently used in order to maintain it intact. For, there is depreciation simply due to passage of time. The entrepreneur often has therefore to make a choice between using up his equipment now or preserving it to be used later on. But, even if he decides not to use it now, still it would pay him to spend a certain optimum sum on maintaining and improving. The expected sacrifice of future benefit involved in the present use determines, says Keynes the user cost, which he defines as "the reduction in the value of equipment due to using it as compared with not using it, after allowing for the cost of the maintenance and improvements which it would be worthwhile to undertake and for purchases from other entrepreneurs." The user cost therefore must be arrived at by "calculating the discounted value of the additional prospective yield which would be obtained at some later date if it were not used now." (General Theory, page 70).

This element of cost, the user cost should be deducted from the gross annual income for calculating the net annual income.



out. But provision cannot be made for any unforeseen depreciation in the value of capital equipments due, for instance, to sudden changes in market values etc.

**National Income :** By National Income is meant the net aggregate of goods and services produced by the labour and capital of a country acting on its natural resources. This net aggregate is, in other words, an accurate estimate of the volume of production as we have seen just now. By National Income we thus mean much the same thing as the country's volume of production in a given year. A way of measuring the National Income of a country is, therefore, to add together the values of all the commodities and services which the community produces during the year.

We should, however, as in the case of measuring the volume of production, avoid double counting and also make reasonable allowances for depreciation of the stock of capital assets. In calculating the National Income, therefore, while we should include the value of the services rendered by the government or any other public authorities, the services for which no payments are made *e.g.*, the services of a wife while she nurses her ailing husband, should be excluded. Such free services as are rendered by the government *e.g.*, police, free education, should be valued at what they cost.

A second way of measuring the National Income of a country is by examining its distribution among persons, that is, by adding up every body's income. The value of the total output of the goods and services is disbursed in making payments to the factors of production which produce the volume of output *viz.*, rent is paid to land, wage is paid to labour, interest is paid to capital and profit goes to the enterprise. The National Income is, therefore, the aggregate of the incomes earned by the factors of production.

Difficulties, however, are there in estimating the National Income by thus making a total of the factor-payments. For instance, we know that the state is continuously receiving mo-

ney from a section of people in the shape of taxes etc., and making payments to another section of people who neither produce anything nor render any service, in the shape of poor relief or old age pensions etc. These 'transfer payments' present certain difficulties in the calculation of the National Income. To avoid the error of double counting of incomes, therefore, these 'transfer payments' *i.e.*, the incomes received from the state either as poor relief or as pension etc., should not be included in the total of individual incomes. Similarly, such personal incomes as receipt of interest on war loan etc., which do not reflect any current productive service of the recipient, should be treated as transfer payments and should be deducted from the total of individual incomes.

On the other hand, the incomes received by the government or other institutions, *e.g.*, schools, colleges, etc., from property or trading, or the undistributed profits of the joint stock companies *i.e.*, the part of the profit which the companies decide to keep as reserve, should be included in the National Income since they reflect contributions to output.

Imposition of indirect taxes or grant of subsidies by the state, again, creates some problems. To take an illustration : While we buy things, we pay the prices which may include an element of tax levied by the state. Such taxes raise the values of the things in the market *i.e.*, their market values but in fact do not reflect any contribution to the productive activity. Higher market values due to higher indirect taxes, therefore, do not mean higher National Income. For, were it so, then the National Income could be augmented by just imposition of higher indirect taxes. These indirect taxes, (and such other levies,) therefore, should be deducted from the market prices of the things we buy, in order to obtain the value of the output "at factor cost".<sup>1</sup>

<sup>1</sup> The amount of the indirect tax which we pay in the shape of higher price, may again be utilised by the state to finance some services it renders to the public, *e.g.*, cleansing the streets. It will be thus a clear case of double counting if we add the value of things at their market prices, which include

Similarly, on the other hand, the subsidies given by the state to reduce the market prices or to keep down the cost of living should be "added back" to the aggregate of the private incomes.

Finally, in calculating the National Income we should add to the volume of production the net income from abroad which consists of income from gifts, income from foreign investments, etc.

There is yet another way by which we can measure the National Income of a country *viz.*, by its expenditure. That is, we may add together the value of all the things that the people purchase and their savings. In the savings also should be included the undistributed profits of companies.

In recent years the concept of National Income has assumed considerable importance. It is in a way an index of the economic activities of the people of a country. Various countries therefore now a days are publishing detailed estimates of their National Incomes. A careful study of the National Income year by year is, therefore, important in more than one way. For instance, it indicates the economic progress or otherwise of the country ; it helps the government to make a comparative study of its prosperity with that of the other countries ; it indicates the distribution of income between different classes and, therefore, is helpful if the government is desirous of removing the inequalities, if there be any. A careful study of the National Income is also extremely helpful for the government while planning its Annual Budget since on it largely depend the decisions of the government to tax or to borrow without having any adverse effect on it or on its distribution.

the indirect tax, as well as the value of the services the state renders by utilising the amount of the tax. To avoid this error of double counting we should deduct the amount of the indirect tax from the market prices of the things we buy.

## CHAPTER 6

### LAND

**Land : Peculiarities of land as a factor of production :**  
Land, as we have seen, exists independently of human effort ; it is a gift of nature and means the whole of animate and inanimate Nature excluding man. Land in economics means the whole of the materials and the forces which are freely given by Nature for man's aid, in land and water, in air and light and heat etc. No amount of human effort can create an inch of land. The first peculiarity of land, thus, is this rigid fixity of its supply.

Secondly, it is claimed that there are 'certain original and indestructible powers of the soil.'

Thirdly, no human labour is necessary to create land. No one, therefore, has to spend anything for its creation. In other words, land has no cost of production. Now, does land alone as a factor of production possess these peculiarities ? Obviously the classical writers believed that these are characteristics of land alone as a factor of production and hence they differentiated land from other factors of production. But some recent writers seem to differ. According to these writers there are valid reasons to doubt if these characteristics exclusively are of land as a factor of production. They further maintain that it is well-nigh impossible to distinguish between land which is the original factor of production and say, capital which, it is said, is man-made and the supply of which, at least in the short period, is as inelastic as that of land. Let us, therefore, examine these peculiarities of land and see how far it is true to say that no other factor can be said to have these peculiarities.

Is the supply of land rigidly fixed ? Of course, in a sense it is. It is possible that some new discoveries or exploration may add a little to the total supply of land just as a little amount of it may be lost to human society by coastal erosion etc. It is true

that such addition to or subtraction from the total supply of land will be very negligible and the effect in either case will be also negligible. But equally true, again, is the fact that by reclamation, clearing, proper draining and irrigation and fertilising the productivity of land can be improved which, in other words, means that the effective supply of land, from the standpoint of economics, can be increased. In this sense, a vast amount of land now brought into use in older countries, excluding of course, the mineral deposits, can be said to be largely the result of human effort. And any attempt to draw a line of distinction between the original land and the land made useful by subsequent improvements is bound to fail. None, however, can deny the truth that it is impossible for man to increase the supply of land by physically adding land to what is already existing, that is, by adding to the surface of the earth. Geographically, the supply of land is fixed. But this fixity of supply is not the peculiarity of land alone. For, ultimately the supply of every thing on earth is, in this sense, fixed.

Secondly, according to Ricardo there are 'certain original and indestructible powers of the soil.' But does land possess any original and indestructible power? Human labour, it is now known to all, can alter the fertility of the soil. For instance, a less fertile plot of land can be made more fertile by proper irrigation, by application of better manures etc., just as on the other hand, negligence and improper or unscientific way of cultivation may reduce the fertility of land in course of time. Methods of cultivation thus may alter the fertility of soil. Facts, therefore, do not justify the claim that there are certain 'original and indestructible powers of the soil.' Even if we accept that there are, it is not practically possible to draw a line of distinction between the work of nature and the effort of men in improving it by proper irrigation, manuring, etc.

Thirdly, it is said, that none needs spend money or make any sacrifice to create land physically, where as to build up capital, saving is necessary, and saving involves sacrifice. Similarly, in the case of labour, training, which means expenditure, makes a

labourer more efficient. But in the case of land, it simply exists. It is true that land is a free gift of nature and hence no money need be spent to create it, but if we want to make it more useful or more productive, we have to spend money. That is, expenditure has to be incurred to improve the fertility or the productivity of the land just as expenditure has to be incurred to train labourers in order to increase their efficiency. Thus in the case of land, although there is no cost of production so far as the gifts which are purely nature's *e.g.*, climate, situation, existing fertility of the soil etc., are concerned, the improvements which are the results of man's labour do necessitate cost of production.

It, therefore, appears that there are valid reasons to doubt if these characteristics are peculiar to land and land alone, as a factor of production.

**The Law of Diminishing Return :** When in need of more crops a farmer may extend the area of cultivation, that is, he may, if he likes, cultivate inferior lands and raise more crop or if he so chooses, he may apply more labour and capital on the particular area of land which he is already cultivating. That is, he may either resort to extensive cultivation or to intensive cultivation. But, the return he will obtain in either case, *i.e.*, either by cultivating the inferior land (which means at increased cost) or by applying more labour and capital to the superior plot he is already cultivating (*i.e.*, at increased cost, again), will not be proportionate to the increase in his costs. Instead, it will be less.

With their existing skill and energy, there is, therefore, not open to the farmers as observes Marshall 'a short road to riches by giving up a great part of their land, by concentrating all their capital and labour on the remainder, and saving for their own pockets the rent of all but that remainder.' Were it so, that is, if such a road were open to them, then obviously they could save a large amount if they wanted by applying all their labour and capital on a small piece of land instead of acquiring more land and paying more rent for them. But, such saving is

not possible because of the operation of a law known in economics as the Law of Diminishing Return, which in the words of Marshall, states that an increase in the capital and labour applied in the cultivation of land causes in general a less than proportionate increase in the amount of produce raised 'unless it happens to coincide with an improvement in the art of agriculture'. In simpler words, by applying successive doses of labour and capital on a particular plot of land a farmer cannot increase the yield proportionately. The yield increases when additional doses of labour and capital are applied, but less than proportionately.

The Law of Diminishing Return is a generalisation based on experience and it is, therefore, known to any practical farmer that even in regard to the best land there is a limit beyond which further expenditure on labour and capital will not be profitable in the sense that the yield will not increase proportionately to the increase in the application of labour and capital.

It is, however, true that the operation of the law may be held in check or counteracted for a time by, say, improved methods of cultivation, application of better manures, arranging better irrigation, progress of knowledge etc. But it is always present and sooner or later the tendency will be evident and it will be found that the return does not increase proportionately when successive doses of labour and capital are applied to any given plot of land.

As is shown in Figure 16, the law can be illustrated with the help of a diagram.

In figure 16, the units of labour and capital applied to a given piece of land are measured along the axis OX and the units of output are measured along the axis OY. As is shown in the figure the output may increase at the beginning more than proportionately, that is, when the units of labour and capital applied to the land are doubled, the increase in the output may be more than double viz., the output increases from MO to M<sup>1</sup>L

when OL unit of labour and capital is applied. But after some time the return will increase but not even proportionately to the increase in the amount of labour and capital applied to it

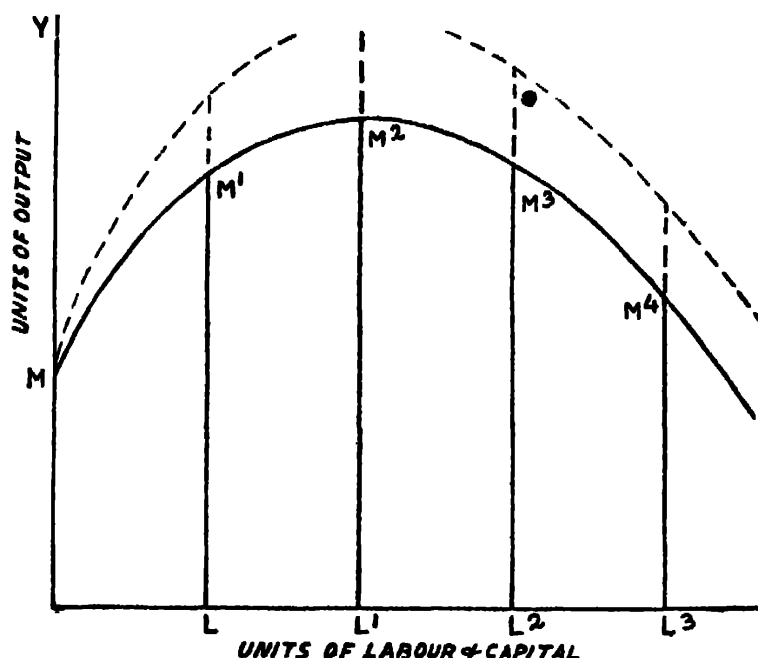


Fig. 16

*viz.*, it increases from  $M^1L$  to  $M^2L^1$  when  $LL^1$  unit of labour and capital is applied. Still later, a stage will come when the return will positively decrease *viz.*, from  $M^2L^1$  to  $M^3L^2$  although more units of labour and capital are applied.

Thus we see that the application of successive doses of labour and capital to a particular plot of land will increase the output but less than proportionately; that is, the output will increase but at a diminishing rate. And if the process is continued, that is, if still further doses of labour and capital be applied then a stage will come when the additional return to be obtained by applying a particular dose of labour and capital will be just equal to the cost incurred to apply that particular dose. The margin has now been reached and application of further doses of labour and capital will not be paying. The land which it is



just worth while to cultivate is the marginal land <sup>1</sup> and the dose of labour and capital applied to this land is the marginal dose. Marginal dose refers to that dose which is just on the margin of profitable expenditure, it does not refer to the dose applied last in time. Application of this dose thus does not afford any surplus but only gives ordinary return to the labour and capital of the farmer. And by intra-marginal lands we refer to those lands which yield a surplus above the cost of cultivation.

This margin, however, is not a fixed margin. It may 'push outward' or 'press inward.' For instance, the land which is now not worthwhile to cultivate, *i.e.*, the submarginal land, may be cultivated if higher demand for foodstuffs due to increased population, make it paying to cultivate this land. The margin in this case is 'pushed outwards.' Similarly, a fall in the demand for foodstuffs may turn the land which is marginal now, that is, just worthwhile to cultivate, into sub-marginal land *i.e.*, unremunerative. The margin in this case is "pressed inwards."

Two points, however, should be remembered to understand the Law of Diminishing Return. Firstly, the Law simply states that the output increases when more of labour and capital are applied to a given plot of land but at a diminishing rate but it does not refer to the price of the output which may be more or less at different times. Secondly, it is also assumed that the land is already cultivated in the best possible way and there is no scope for improving on it, that is, the technique of cultivation or the skill of the farmers is assumed to remain the same. For, improved methods of cultivation or progress in the technical knowledge of the farmer, it is admitted, may increase the productivity of the soil and thus result in an increase in the output. This, however, does not mean that the law will not operate. It will operate and after a time the yield will increase at a diminishing rate but the curve  $MM^4$  will rise from its existing position to a higher one as is shown in Fig. 16 by dots.

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<sup>1</sup> That is the land which just pays the expenses of cultivation and yields no rent.

**Application of the Law of Diminishing return to Fisheries, Mines and Building sites :**

**Fisheries :** In the case of river fisheries since the supply of fish is limited, sooner rather than later, a stage will come when application of additional doses of labour and capital will yield extra-return but at a diminishing rate. But in the case of sea fisheries there being abundance of fish the position is different and it is likely that the return may not decrease even when successive doses of labour and capital are applied.

**Mines :** In the absence of any progress of knowledge or in the art of mining, that is, if the other things remain the same, then application of additional doses of labour and capital to mines will increase the yield but at a diminishing rate. For it is obvious that gradually in the process the difficulties and therefore, the cost of raising the deposits from the lower bottoms will increase.

But one point should be noted in this connection. A mine gradually becomes exhausted when minerals are continuously raised from it ; the produce of a mine, that is to say, is a part of it. But when properly cultivated the land retains its fertility and hence the supply of agricultural produce is perennial. But in the case of a mine, the more we take out of it the less deposit will remain within it and a time will come when the mine will be literally empty. It is therefore said that the law of Diminishing Return is not as strictly applicable to mines as it is to land.

**Building sites :** The Law of Diminishing Return is also applicable to building sites. "We cannot" it has been rightly observed, "build a city vertically like the Tower of Babel any more than we can grow all the world's wheat in a back garden." The point is that if successive doses of labour and capital be applied to construct additional stories of a building, then a stage will come when it will be considered wiser to build a new building on a new land than to construct additional stories in the same building since it will (in course of time) be more inconvenient and costly and therefore less profitable to do so. The Law of Diminishing Return is, therefore, applicable to building sites.

**Combinations of factors: Fixed and Variable proportions :** Nothing can be produced without a combination of the factors of production. It is, however, possible that in some cases the required proportions may be more or less fixed. For instance, there may be some plant which employ a fixed number of workers. But it is more likely that the proportions of different factors can be and usually are varied.<sup>1</sup> For example, a cultivator may decide to spend more on land and less on labour ; or more on labour and less on land etc., just as a businessman may decide to spend more on capital, that is, machines and less on wage, that is, labour etc. Production is maximised with the least cost combination, or in other words, when the factors are combined in the right proportions. But maximum production with minimum cost is not possible if the supply of any of the required factors, which are not substitutable for each other, remains constant while increased proportions of other factors are employed. For, this will simply mean that the cost of production will increase and the yield will increase but at a diminishing rate.

The English classical economists considered the application of the Law of Diminishing Return particularly to land because the supply of land is fixed and if increased numbers have to be fed, recourse must be had either to extensive cultivation *i.e.*, bringing inferior lands under cultivation or to intensive cultivation *i.e.*, application of more and more doses of labour and capital to the same land. But the yield in any case does not increase proportionately to the costs. But we have seen that the same thing is true in the case of other factors also whose supply is inelastic. The Law of Diminishing Return will operate whenever the supply of one or more factors is fixed while that of the others can be increased in producing any thing.

<sup>1</sup> Since the proportions of the factors combined together to perform a given task can be varied recent writers speak of the law of variable proportions.

## CHAPTER 7

### LABOUR

**Labour :** What it means as a factor of production in economics ?

Man is the only active agent in all productive activities. The role of Nature is purely passive. Man organises production by combining the factors of production in right proportions. Every decision rests on him. What is even more important is that whatever is produced is again consumed by man. Consumption and production thus centre round man ; hence the importance of Labour (which represents human element in production) as a factor of production in economics.

By labour in economics is meant both physical and mental exertions which are 'irksome' and thus would not be undertaken by man were there no stimulus of some other ulterior aim, *e.g.*, to make provision for future or reward, etc., obviously in the shape of money. In the words of Jevons, labour in economic sense refers to any exertions either of body or of mind undergone by man partly or wholly with a view to some good other than the pleasure derived directly from the work. This 'some other good', naturally refers to an inducement in the shape of wage or profit or broadly, reward in terms of money.

Labour thus "represents the human element in production not just muscular effort (which can be replaced by machinery), but also skill, enterprise, organising ability and above all judgement." In any country, therefore, the total supply of labour depends firstly, on the number of labourers and secondly, on their efficiency. In studying labour as a factor of production, therefore, we should study how the population of a country grows in number and on what depends the efficiency of the people.

**Malthus's Doctrine of Population :** The course of the growth of population has always been a subject of careful and

interesting study of social and political thinkers of all ages. But until the year 1798 when Thomas Malthus, an English clergyman, published his famous Essay on the Principle of Population, no methodical or systematic study was made of the subject. This essay of Malthus is, therefore, rightly said to be the starting point of all modern speculations on the subject of the growth of population.

Briefly, the theory of Malthus may be stated in the following way.

Population, in the absence of any check will grow at a rate faster than Nature's demand for it. By Nature's effective demand for population Malthus meant the amount of produce which Nature returns to the labour of men. And he supported his view by showing that upto his time, in no country once it was thickly populated, a rapid increase in population had led to proportionate increase in the supply of food. That is, a rapid increase in the population nowhere led to a proportionate increase in the Nature's demand for population.

According to Malthus, in the absence of any check the population increases in geometrical progression *viz.*, 1, 2, 4, 8, 16, 32 etc. ; and the supply of food increases in arithmetical progression, *viz.*, 1, 2, 3, 4, 5, 6, etc. Obviously, the numbers increase much faster than the supply of food does and if the process is allowed to continue then the population will tend to double itself in every 25 years and naturally will outstrip the food supply in any country. Malthus took pains to study the growth of population in some countries of his time and was inclined to believe that it had always been so in the past and would also be so in future.

Naturally, therefore, he argued that if the increase in the number of population be not restrained<sup>o</sup> by some preventive checks, that is, by those influences which lead to a diminution of birth rate *e.g.*, self-restraint in married life, late marriage, etc., the growth will be checked by positive checks by which he meant the influences which increase the death rate, *e.g.*, epidemics,

wars, plagues and famines. Malthus therefore urged the people to use restraint in married life, to abstain from early marriages etc. That is, he urged them to adopt preventive checks in order to avoid the sufferings and the miseries which the positive checks necessarily entail.

**An estimate of Malthus's Doctrine of Population :** Malthus's conclusions are generalisations from the facts of his own time and in his own country. But it is now pertinent for a student to ask, do the facts corroborate Malthus's pessimism? Does the gloomy spectre of famine, pestilence and war which he envisaged necessarily await our species? Indeed, later facts have falsified his apprehensions and have proved that he was unduly pessimistic. Towards the close of the 19th century, that is, a century after the publication of his famous Essay, the position in Europe was just contrary to his apprehensions. Decline in population and not a disproportionate increase in it was the striking feature.

The Industrial Revolution literally revolutionised the whole system of production both in the sphere of agriculture and industry. Malthus could not conceive of the possibilities of growing food in a scientific way by the application of modern machineries, and also of the progress which was made in manufacturing industries. It did not strike him that increased production may increase man's crave for higher standard of living, and that as man becomes more civilised, he aspires for a higher standard of living, and the more he aspires for a higher standard of living, the less prolific he becomes.<sup>1</sup> That by improved methods it is possible to produce more, therefore, was inconceivable for Malthus just as he could not think of the tremendous progress of steam transport in land and in sea of later years which facilitate importations of foodstuffs by deficient

<sup>1</sup> The later course of events therefore shows that neither the population doubles itself in every twenty-five years nor it is necessary for the people to die in starvation if they cannot grow food for themselves. The mathematical proposition of Malthus expressing the ratios of increase of number of population and supply of food is, therefore, inexact and misleading.

countries from those who have surplus. Now no body feels any surprise if food is carried from one country to another even by air. But, it was difficult for Malthus to imagine that wealth can buy food for the people of a country industrially advanced but not self-sufficient in agriculture. Men in these days need not die starving if they cannot grow enough food for themselves provided they have the purchasing power to buy food from elsewhere.

The problem of population, therefore, should be viewed from a different angle *viz.*, whether population increases at a rate faster than the rate of increase of the wealth of a country or not.

“Under favourable conditions” rightly observes Seligman, “population may increase gradually and wealth rapidly..... The problem of population as a whole is then, not of mere size, but of efficient production and equitable distribution, that is, it is a problem not of numbers alone but of wealth.”

An increase in number is therefore not necessarily harmful, nor does it impede production. Instead, by securing better division of labour in an industrially advanced country it aids production. A country again can feed a larger number of people if its wealth, instead of being allowed to concentrate in the hands of a few, is distributed equitably among the people.

There is, however, no reason to justify an increase in number if the country is unable to feed the people adequately. Thinkers all over the world are alive to the evils of over population. They, however, concern themselves not with the ratio of population and the supply of food, *i.e.*, means of subsistence which the country produces but with the ratio of population and the wealth of the country. Increased wealth can feed more people, for, food can be obtained from elsewhere in exchange of wealth. Secondly, less emphasis is now given to moral restraint as was advocated by Malthus. Instead, they advocate for Neo-Malthusian method of controlling the rate of birth with the help of contraceptives, spread of female education, etc.

Before we conclude, it is necessary to mention that however cogent may be the arguments of the critics against the theory of Population propounded by Malthus, his apprehension of persistent increase in the number of population *i.e.*, when unrestrained, ultimately leading to famine, pestilence etc. is real at least in so far as the backward countries of the world, *e.g.*, India, China etc., are concerned. And however improved may be the means of transport, the dire consequences of over population, that is, a number which cannot be maintained by the available means of subsistence of the country are felt by the belligerent countries, however rich, during the times of war, when they have to experience extreme difficulties of import. And we know riches do not produce food ; they can only buy. Buying becomes a problem during war and Malthus's apprehensions appear to be real in times of such emergencies.

**The Optimum Theory of Population :** Malthus, we have seen, was unduly apprehensive of the positive checks to the growth of population if the preventive checks are not adopted, that is, if the population is allowed to increase without any restraint. His ground of apprehension was that the 'means of subsistence' would be inadequate for the increased number. Later events, however, have shown that Malthus's apprehensions were imaginary and unreal. The problem of population, it is now acknowledged, is in reality not a problem of mere numbers, rather, it is a problem of numbers in relation to productive efficiency.

The economic resources of a country at any given time and with given technical knowledge, efficiency, etc., when fully utilised, yield an income. But the income *per capita* will not be maximum if the number of population is larger or smaller than what is required for full utilisation of the country's resources and opportunities. That is, maximum *per capita* income is not possible if the country is either over populated or under-populated. *Per capita* income will be maximum only when the country has the optimum or the best possible population. Optimum population thus refers to that number of popu-



lation which secures the maximum real income of goods and services per head. The real income per head will decrease if the size of the population deviates from this optimum number, that is, if the number increases or decreases.

The idea of optimum population has been developed in relation to purely economic conditions of a country and has been popularised specially by two recent writers namely, Dr. Edwin Cannan and Professor Carr-Saunders. It may, therefore, be of some interest to know their ideas about optimum population.

By optimum population Cannan means that number of population which, under given conditions, that is, knowledge and circumstances and other things remaining the same, is so exactly fitted to the circumstances that the returns *i.e.*, the productiveness of labour would be less if the number were either less or more than this optimum number, which, in other words, means that the population is optimum when the returns are maximum.

"Just as" says Dr. Cannan, "there is a point of maximum return in each industry, so there must be in all industries taken together. If population is not large enough to bring all industry up to this point returns will be less than they might be ; if, on the other hand, population is so great that the point has been passed, returns are again less than they might be." The remedy in the first case is an increase of population and in the second, a decrease of population. In other words, knowledge and conditions remaining the same, "there is what may be called a point of maximum return, when the amount of labour is such that both an increase and a decrease in it would diminish proportionate returns."

"In any country under any given conditions" observes Prof. Carr-Saunders, "there is an 'optimum' density of population which, if attained and not exceeded, will obtain the largest income per head that is within reach ; a density, that is, which is the most desirable having in view the purely material idea of the average income of the inhabitants."<sup>1</sup>

<sup>1</sup> Carr-Saunders—Population, 1925, p. 31.

This then is the concept of optimum population. But there is no reason to believe that the point of maximum return is "permanently fixed either for particular industries or for industry taken as a whole." Instead, the "position of the point is perpetually being altered by the progress of knowledge and other changes." Hence the optimum size of the population does not refer to a rigidly fixed number. The whole economic system of a country is never static; but it ceaselessly undergoes changes as a result of continuous progress of knowledge, inventions etc. In different set of circumstances, therefore, different numbers may be regarded as optimum, that is, which secures the maximum per capita income.

According to Dr. Dalton, over-population or under-population is the result of a maladjustment of the actual number of population to the optimum. He explains the positions with the help of a formula *viz.*, if A stands for actual number of population, O for the optimum number, and M for the degree of maladjustment, then M (*i.e.*, degree of maladjustment) =

$$\frac{A \text{ (actual population)} - O \text{ (optimum population)}}{O \text{ (optimum population)}}$$

Now, M may be positive, negative, or zero, that is, there may be over-population, under-population, or optimum population.

**An Estimate of the Optimum Theory of Population :**  
The great merit of this theory of population is that it helps us to discard Malthus's pessimism and to look at the problem of population from a different and a more rational perspective. There is a point, we learn, upto which increase in the size of the population is even necessary for the proper utilisation of the resources and opportunities of a country. Any increase, therefore, need not be viewed with alarm. Of course, any increase beyond this optimum is harmful since that will mean lower per capita income. We should, as we have seen, study the problem of population not as a relation between the size of the population and the supply of food, but as a relation between the

size of the population and the productive efficiency of the country. In other words, the theory of optimum population is "concerned with the relation between the size of the population and productive efficiency or, in other words, the amounts of all other factors, which co-operate with labour in production and the technical co-efficients of production." "From a consideration of this relation arises, as against Malthus's maximum population, the concept of an optimum population consistent with a given amount of means of subsistence. The optimum population is that population which with given amounts of other factors (including land, productive technique, capital and organisation) will produce the maximum product. Any increase or decrease of the population above or below that size will diminish the product."<sup>1</sup>

Instead of viewing any increase of population with alarm, the theory makes it clear that the optimum may often mean a larger number of population, if it is possible to secure a maximum per capita income for all by improved knowledge and technique of production. On the other hand, there may be over-population even in a nation of millionaires if it is proved that the per capita income would be more were the size of population slightly smaller.

But however reasonable the theory may appear to be, the problem of ascertaining what exactly will be the optimum population for a country presents some real difficulties. By optimum population is meant that number which, under a given set of conditions, secures maximum income per head. But the conditions are constantly changing since the economic system is never static, it is dynamic. The concept of optimum population, therefore, is elusive and of little 'practical interest'. It is, of course, desirable for countries to have this optimum population but in this constantly changing world of ours, this optimum will also be ceaselessly changing and it is, therefore, useless to

<sup>1</sup> Eric Roll—*Elements of Economic Theory*—p. 215.

hope, unless it is just by an accident, that countries can really ever have this optimum number.

**Growth of Population :** Natural increase, *i.e.*, the excess of births over deaths and immigration are the two causes of an increase in the size of population of any country. Rate of birth, however, depends on several factors viz., climate of the country, social and religious customs, standard of living etc. And as a country becomes more advanced the death rate becomes low.

Net increase of population of a country at any given time, therefore, can be known if the total number of deaths and emigration be deducted from the total number of births and immigration.

But if we care to look at the problem more critically, we will find that an excess of births over deaths is not always an indication of a growing population just as an excess of deaths over births is not always an indication of a declining population. For, in the first instance, more deaths may occur among the younger age-groups and there is no guarantee that the babies born will survive their reproductive age. Similarly, in the second case, more deaths may occur among the older age-groups, who have passed their reproductive age and thus it may not necessarily lead to a decline of population.

It is, therefore, now admitted that not the vital index but the 'net reproduction rate' measures the growth of population more accurately. The net reproduction rate is ascertained thus : In a woman's life from the years 15 to 50 is the child bearing period. Assuming there are 1,000 newly-born female babies, if on the basis of present fertility of women and mortality, these babies during their child bearing age, that is, during their age between 15 to 50 give births to exactly 1,000 female babies, then at this net reproduction rate the population will reproduce itself. But it is possible that of these 1,000 babies all may not survive through their child-bearing age (or some may die before reaching this age), just as, on the other hand, they

may give birth to more than 1,000 female babies. In the first case, the population will tend to decline, while in the second, it will tend to increase.

There are, however, other factors which affect the net reproduction rate *e.g.* incidence of widowhood, check to the growth due to use of contraceptives, etc.

**Efficiency of Labour :** The more efficient a labourer is the greater will be the contribution of his labour to the total volume of output. The volume of output thus depends not only on the supply of labour, that is, on the number of workers but also on their efficiency. The efficiency of a labourer depends both on his physique and intelligence.

The physique, that is, the health and the strength of a worker depends on the climate of the country, surroundings in which he works, the diet he takes and the other necessities of life *e.g.*, clothing, etc., he is provided with, the house in which he lives, the number of hours he has to work etc. Apart from the fact that superior efficiency of some labourers may be ascribed to their racial qualities, each one of the above factors has a positive bearing on the efficiency of a labourer. A labourer, for instance, is likely to be more efficient if the climate is temperate instead of being extremely hot or cold, for, either is less conducive to his efficiency. Proper ventilation, sanitation, lighting, etc., in the mills and factories, where he works, that is, the surroundings obviously influence the efficiency of the worker. The importance of better housing, a balanced diet, better clothing, etc., can hardly be over-emphasised. Longer hours of work turns a worker indifferent, callous and reluctant. Lesser number of hours and proper intervals are necessary to make a worker work with willingness and interest which, in other words, means to make him more efficient.

Efficiency of a labourer also largely depends on his intellectual and moral qualities, that is, on his intelligence, judgment, imagination, honesty, etc. True development of these

qualities depends on his education, chances of reward and promotion, hopefulness, freedom, absence of monotony of work, etc.

Finally, besides all the above factors which do influence the efficiency of a worker, his industrial efficiency also depends on the proper organisation of labour, proper technical training and to a considerable extent on the ability of the employers on whom rests the responsibility of ensuring efficient management of production.

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## CHAPTER 8

### CAPITAL

**Definition :** By capital in economics is meant the concrete instruments of production *e.g.*, machines, plants, etc., which are the physical embodiments of past human labour and which, while help further production of wealth cannot be consumed directly.

To avoid confusion it is necessary to clearly understand the distinction between capital and money on the one hand, and capital and wealth on the other.

Money, we know, is a medium of exchange. One can buy with money articles he wants to consume now, that is, immediately or he can buy machines, that is, concrete instruments of production. In the first case, money is not capital in economics but in the second case, it is, in the sense that it is the liquid resource convertible into concrete capital goods. Capital goods, thus always have a money value and therefore can be themselves converted into a stock of money, just as a stock of money is convertible into capital goods. But on this ground it will be a mistake to regard money as capital. An illustration will make the point clear. Were it so, that is, if money as such could be regarded as capital, then possession of money would mean possession of capital and a country would be wealthier if it possessed enough of money. This is, however, an error to think. For, increased supply of money only raises the level of prices and makes money less valuable, it does not mean an increase of capital, which we know, means stock of assets.

By capital, then, we refer to those resources which can be used for production of wealth ; but we do not use the word to mean wealth as such. For, wealth is understood in economics as a stock or fund of stored up facilities existing at a given time upon which we can draw for the satisfaction of our wants in future.

Wealth, however, is converted into capital when it is used for production of more wealth. A building, for instance, to the owner is wealth so long as he uses it as his residence ; but the moment he decides to use it as a factory-building, it becomes capital.

It is, therefore, clear that things while they are regarded as agents of production constitute capital but when they are subjects of consumption, or yield the pleasures of possession, that is, when they are regarded as the results of production, constitute wealth in economics.

The concept of capital therefore may be used in more senses than one. For instance, by capital we may mean, machines, factory building, etc., that is, the capital goods. Or, we may mean a stock of money which can be converted into concrete capital goods and thus create income. The concept may be used in yet another sense, viz., Debt-Capital which yields an income to the lender but not necessarily create an income. For example, when one buys stocks, shares etc., one adds to his own capital, which yield an income to him but the money borrowed by issuing bonds or floating shares may not be utilised for any productive purpose, that is, may not create income though the owner of the stocks and shares gets an income from these.

**Forms of Capital :** Forms of capital have been classified in various ways viz., either according to the nature of their ownership or according to the type of services they render in production or, again, according to the possibility or otherwise of different alternative uses etc. We should here discuss, in brief, some of the important forms of capital.

**Individual or Private Capital and Social Capital :** That part of an individual's wealth which he uses in acquiring money income is his capital. \* Since the income is acquired by means of trade Marshall prefers to call it *Trade capital*. This includes things used by the individual in his trade e.g., machines, plant, raw materials, food etc., of which he may keep a store for the workers working in his trade and also the goodwill of his



business. The loans he might have advanced or the shares he might have purchased should, of course, be added, since, these yield him income.

From the standpoint of the society as a whole, capital consists of all wealth which yields an income. In *Social capital* we will include things which are in public ownership, but free gifts of nature should not be included.

There are certain goods which can be used for more than one purpose e.g., coal, while there are others e.g. blast furnace, which can be used only for some specific purpose and cannot be adapted to different or alternative uses. Goods of the first type constitute what is known in economics as the *Floating capital* and of the second type constitute what is described as the *Sunk capital*.

Thirdly, machines, railways, docks, factories etc., which aid labour in production constitute producer's *Auxiliary or Instrumental capital* and food, clothes, houses etc., which afford sustenance to the workers directly constitute *Consumption capital*.

Finally, a distinction is made between *Fixed and Circulating capital*. Machines, factory buildings etc., which are durable and are not exhausted by a single use, but the return to which is spread over a period corresponding to their durability are known as *Fixed capital*. *Circulating capital*, on the other hand, consists of those things, generally raw materials, e.g., coal, cotton, etc., which fulfil the whole of their office in the production in which they are used by a single use, that is, in other words, they exhaust themselves by being used once only in the process of production.<sup>1</sup>

**Importance of Capital in Modern Methods of Production :** Plainly speaking, the importance of capital would be nil were there no organisation and labour to utilise it. It is only when capital is utilised by man, it becomes productive of wealth. And modern economic organisation or the methods

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<sup>1</sup> Goods which are neither in the stage of raw materials nor are finished products ready for consumption, that is, the semi-finished goods or 'goods in process' are called by Keynes as 'Working Capital.'

of production so essentially utilises the services of capital or rather depends on the services of capital that it is justifiably said to be capitalistic production. Increased volume of production is possible if increased use of machines, plants etc. be made, which otherwise means, the more the volume of capital utilised the larger will be the volume of production. For instance, without capital i.e., without the aid of tools, machines etc., a labourer can produce but little while with the help of tools, machines etc., he can produce considerably more. Capital, therefore, aids labourer in producing wealth by providing him with tools, machines etc.

Increased use of machines, however, necessarily implies greater division of labour and more round about method of production. That is, the whole process of production is split up into several successive stages necessitating increased use of machinery in all these stages of production. The process ensures a greater output at a low cost, because, it is economical and efficient. In such a prolonged process of production, split up into a series of successive stages, the labourers who are employed only do a part of the finished product which, because the method of production is round about, takes time to come out as finished product ready for sale. Meanwhile, the labourers must live, and are, therefore, given their wages by the man who employs them. Capital, therefore, aids labour by giving subsistence while the process of production continues.

Lastly, continued production in the round about method is possible if necessary raw materials are supplied throughout. Capital, by ensuring supply of these raw materials, keeps the whole process moving and thus ensures continuity of productive activities.

**Accumulation of Capital :** A community may accumulate capital if it is prepared to 'wait', that is, if it is agreeable to forego consumption for the time being. Capital cannot accumulate if instead of 'waiting' the community chooses to spend the whole of its income on current consumption. For, in that

case, it would simply have no resources left with which to create capital. Some, therefore, should consume less than they are in a position to consume in order that capital may accumulate.

Three courses are left to a community desirous of increasing the volume of its capital, that is, the stock of its existing assets. These are, firstly, they may, if they so choose, concentrate on production of consumers' goods, that is, food, clothes, etc. during a certain period of a year, say, ten months and thus make a stock of these goods sufficient enough to draw upon during the rest of the year, *i.e.*, two months while they will be concentrating on the production of capital goods. Or secondly, they may divide their working hours of each day and devote a part in producing the consumers' goods and the other part in producing the capital goods. Or, they may adopt the third course, namely, it may be decided that some of them will produce consumers' goods while others will produce capital goods. Those who produce capital goods will be supplied with consumers' goods by those who produce these goods.

Evidently, then in any case, unless consumption is restricted production of capital goods or creation of capital is not possible. In other words, instead of consuming the whole of their current income the people must save some part of their income so that the stock of capital may increase. This, however, necessarily implies that the peoples' money incomes are at such a level that they are in a position to save after meeting their bare necessities of life. There must be, that is to say, a margin between their incomes and expenditures to enable them to save a portion of their incomes after meeting their expenditures.

There are, however, various other motives which prompt people to save. They may, for instance, save with a view to make provision for their future generation. Family affection, that is to say, may and necessarily does, prompt men to save even sometimes by curtailing their present consumption. Similarly, people may save for future contingencies. Wealth, in the pre-

sent set up of society, we know, gives status and power to a man possessing it. Men may, therefore, be prompted to accumulate wealth by saving to enjoy status and to wield power in society.

The aggregate volume of savings of a community also depends on some external conditions. There must be, for instance, a feeling of security of life and property to encourage saving. In the absence of such a feeling people would like to spend the whole of their incomes on current consumption instead of saving, *i.e.*, foregoing consumption or, they may hoard wealth. A stable and strong government, therefore, helps accumulation of capital by guaranting security of life and property and thus encouraging people to save.

The volume of saving, again, will be more if there are suitable opportunities for safe and profitable investment of capital. Institutions like banks, insurance companies, co-operative societies etc., encourage saving by providing facilities for investment.

Finally, the rate of interest also influences the volume of savings. A higher rate of interest will prompt men to save more since it will mean a greater reward for their 'waiting' and, therefore, will serve as a greater inducement for them to save, while on the other hand, they may be reluctant to save if the rate of interest is so low that it serves as no inducement for them.

It is, however, not always true that more will be saved if the rate of interest is high. For instance, those who save to meet future contingencies are less likely to be influenced by the rate of interest. Or, take again the case of those who save because they want to have a fixed income in future. They have therefore, to save more when the rate of interest is low. That is, they will save less when the rate of interest is high in order to have the fixed income they want in future.

A higher rate of interest, again, may depress economic activities since it enhances the cost. If higher rate of interest curbs the volume of investment and, therefore, depresses the eco-

economic activities of the community, then the aggregate money income will necessarily fall. Consequently, the aggregate volume of savings will shrink. A higher rate of interest, therefore does not necessarily increase the volume of savings although normally speaking, people will be more inclined to save if the rate of interest is high than they will be when it is low.

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## CHAPTER 9

### THE ORGANISATION OF PRODUCTION

**The Role of the Entrepreneur :** Ours is an age of specialisation. And in the sphere of organisation of production, the Entrepreneur is a 'Specialist.'

Any single process of production requires besides land, labour and capital, that is, implements, one more thing, *viz.*, the 'directing control'. In the early stages of industrial development the need of this control was there as it is now. But then the organisation of production presented little problem. For, the volume produced was small since the extent of the market was limited. Constant changes in the fashion and tastes presented no problems and above all the capital required to co-ordinate the factors of production was necessarily small. Even then, some initiative and judgment, ability and tact were necessary for the man entrusted with the task of directing the control of production. But no genius born with the aptitude to organise production, to undertake risk, alert and expert in anticipating changes in the demand and able in adjusting the supply to these changes, was called for. In short, the 'specialist' was not so vitally necessary then as it is now.

The problems of modern industrial organisation are the problems of the entrepreneur on whom rests the responsibility of co-ordinating the factors of production and controlling the policy of the firm.<sup>1</sup> The entrepreneur is thus the pivot of modern industrial organisation.

The tasks of the entrepreneur are manifold. He controls the policy of the business. That is, he collects all relevant information he thinks necessary, judges them, thinks, decides

<sup>1</sup> A firm as Benham puts it, is "a collection of factors—land, buildings, plant and equipment, workers, materials and so on—controlled by an entrepreneur". Benham—Economics, p. 163.

and acts. The major decisions he has to make, are, firstly, what commodity he will produce, secondly, the technique or the method of production he will adopt, thirdly, the volume, that is, the amount he will produce and lastly, the site, that is, where it is most advantageous to produce.

Each of these decisions will present multitudes of problems for the entrepreneur. For instance, fashions change these days more quickly and suddenly than can possibly be imagined and such changes in the fashion make things obsolete to-day which were perhaps most fashionable only the other day. Whenever such changes in fashion take place, the entrepreneur has to change the patterns of the articles he produces. Similarly, in the domains of science and technique, improvements and inventions are constantly taking place. The entrepreneur, therefore, has to be alert so that he may not lag behind in taking advantages of the most modern method of production. For, that will mean higher cost of production for him than it is for others adopting the latest technique of production.

The process of production in these days is round about and production is undertaken on a very large scale. It is, therefore, necessary to buy raw materials on a considerable scale much in advance and the process of production continues in anticipation of the market for the finished product in future. But it is quite possible that the demand may fall suddenly and therefore the market may be lost. The size of his plant and the volume to be produced therefore always present serious problems for the entrepreneur.

Finally, the choice of site is no less important. For, innumerable advantages accrue if the site chosen is proper. Availability of raw materials and power resources, transport facilities, distance of the market, all these are factors which have to be taken into consideration before the site is selected. And on the entrepreneur rests the responsibility to consider these things. A mistake on his part will spell, sooner or later, a disaster for the firm he controls. For, the abler entrepre-

neur will drive him out of the picture by his right decisions and shrewd foresight.

All these, in short, are to stress the amount of risk the entrepreneur has to undertake and the wisdom and foresight necessary for proper co-ordination of the factors of production and in taking each of these decisions in organising production. He has, again, to pay remunerations to the factors he employs, viz., rent for the land, wage to the labourers, and interest on the capital in order to enable him to produce and in incurring these expenditures he has to be careful to produce that volume of output which he can dispose of at a price he has in mind to fix, leaving sufficient margin of profit for him. These factors have to be remunerated for their services no matter whether he incurs a loss or profits accrue to him.

A successful entrepreneur<sup>1</sup> is he who assumes these risks and succeeds in avoiding wastes and presents the finished product at a price within the means of largest number of consumers with sufficient margin of profit for him, too.

The 'Captain of industry', the modern entrepreneur must be a man of imagination and a leader among men. He has to organise and supervise the work of a large number of workers working in different capacities in different stages of production. Not necessarily a technical expert, he should, however, have a general grasp over the technical aspect of the business and also a deep insight into human nature. Able and quick in making decisions, watchful and alert about the trend of the market, keen on producing according to the latest method of production with the aid of the best machines, the entrepreneur is there to 'harmonize' the desires of the buyers to fulfil their wants as fully as pos-

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<sup>1</sup> In the modern industrial organisations, i.e., in large corporations or joint stock companies, the organisational work, that is, the work of management is left in the hands of salaried managers. But their position should not be confused with that of the entrepreneur. For, they neither formulate the policies of the firm nor suffer the loss, if the firm loses or enjoy the profit, if there is any. It is the entrepreneur who formulates the policies, bears the risk and suffers the loss, if there is any loss or enjoys the profit, if there is any profit. The entrepreneur controls the business.



sible with his own desire of earning the maximum amount of profit.

### **Forms of Business Organisation.**

**Individual Proprietorship :** Predominant in the sphere of agriculture and retail trade in most countries, these 'one-man concerns' still exist in fairly large number, though, their importance is gradually declining these days because of the predominance of large joint stock companies or corporations.

These concerns are under the direct supervision and control of a single entrepreneur, the producer. He invests his own capital or capital borrowed by him, employs factors of production as he thinks proper, supervises the work himself, and organises the production with none to share the responsibility with him. If, therefore, the business incurs a loss, it is his; and if it earns a profit, it is his. Similarly, the legal liability of the proprietor for his business debts is unlimited and extends to all his personal properties.

**Advantages :** There are certain advantages of single proprietorship form of business organisation. For example, it is possible for the producer to supervise the production personally, and, therefore, to avoid wastages. He can take quick decisions and prompt action since he has to consult none. Again, he works with the utmost sincerity and enthusiasm since every pie of the profit will be his. Similarly, he will work with much care and caution to avoid loss which will be his alone. The producer also can pay personal attention to the needs of the consumers.

**Disadvantages :** Individual proprietorship as a form of business organisation is fast disappearing these days because of its some serious defects. These are, firstly, in these days of large scale industries and keen competition, the capital required for productive activities is considerably large and it is too risky for an individual to invest so much capital all alone. Besides, it is not always possible for an individual to invest such large amount of capital. Moreover, the risk is more since the liability is unlimited in this system of production. It is said that personal supervision and attention of the entrepreneur

ensure greater success of this system of production. But it is not practically possible for one individual to pay attention simultaneously to more than one act in the process of production and this obviously limits the advantage of single proprietorship as a form of business organisation.

**The Partnership :** The Partnership is a form of business organisation which is controlled and managed by two or more persons who are closely known to one another and who share the responsibility of the business jointly and severally. Usually, the share of each partner's contribution and of profit and loss, are specified in a legal Deed of Agreement. Partnership is said to be the oldest and simplest plan for renovating the energies of a business by taking some of the ablest employees of the business into partnership instead of allowing them to dissociate and start separate business for themselves.

**Advantages :** In partnership it is naturally possible to raise more capital. Moreover, this form of business organisation ensures greater efficiency since the work of management of the business may be divided among the partners who are all sincerely interested in the success of the business.<sup>1</sup> Partnership as a form of business organisation, therefore, has greater strength and elasticity than the single proprietorship has, and hence, it still exists as an important form of business organisation. It is capable of adapting itself to different problems.

**Disadvantages :** There are, however, certain serious defects of this form of business organisation. For instance, the unlimited liability which it involves often scares away men with money. They may be afraid to enter into partnership since any one of the partners may be held responsible for the business debts and obligations and the creditors may realise the amount of the debts from any one of the partners. The risks for each partner is thus considerable since each is responsible

<sup>1</sup> Among the partners some often supply the capital and are known as 'sleeping partners' while those who manage and direct the business are known as the 'active partners.'

for the act of any other in so far as the business is concerned. It is, therefore, not always possible to raise sufficient funds and ensure production on a large scale. Again, differences among the partners often spell disaster for the business. Similarly, death, insolvency or withdrawal of any one of the partners leads to the dissolution of the business and hence, not infrequently, there is absence of continuity of this form of business organisation.

**The Joint Stock Company or the Corporation :** In these days of large scale production, the Joint Stock Company or the Corporation is the most suitable form of business organisation. A joint stock company is an association of shareholders or stock-holders who subscribe to its capital and exercise control in an indirect way by electing a Board of Directors in whom is vested the responsibility of the management of the business. Unlike partnership form of entrepreneurial organisation the joint stock company does not cease to exist on the death of the shareholders or directors. And the liability of each shareholder for the debts of the corporation is limited to the face value of the shares he owns of the corporation. That is, in case of failure of the company, the loss of the shareholders will be equal to the amount of the value of the shares they own of the company, the creditors of the company cannot attach their other properties. A joint stock company or a corporation is thus a form of business organisation in which the liability of the share-holders is limited. Another important feature of this form of business organisation is that it exists as a 'legal person' apart from the share-holders who supply the capital, own and control the company. The business is thus carried on in the name of the company which can sue and can be sued in its own name. The company can own property and enter into contracts in its own name.

By buying shares of a joint stock company the individuals become shareholders, that is, in other words, they become owners of the company. These shareholders exercise control over the management of the company by their right to elect

the Board of Directors in whom is vested the responsibility to look after the business as a whole, to formulate policies etc. Actual management, however, is entrusted to the salaried managers.

It, therefore, appears that the corporations are managed in a democratic way. For, there is the desirable division of rights and responsibilities, of ownership and management. The risks are undertaken by the shareholders who supply the capital, policies are formulated by the Directors elected by the shareholders, who also supervise the business and the salaried officials are in charge of detailed management of the business. Apparently, therefore, the corporations are managed in a democratic way. But if we probe into details we will see that it is not always so. Not infrequently the control and management of the joint stock companies is oligarchical. For, although the risks are undertaken by the shareholders who supply the capital, they hardly have any effective control over the general policies of the company nor usually do they go into details. It is only a few, who manage to have a large number of the shares do in practice exercise control over the affairs of the company. In meetings they dominate and succeed in getting things done to their liking and desires.

A joint stock company raises its capital by selling shares or stocks<sup>1</sup> to the members of the public. Owners of these shares are owners of the company. They attend the meetings of the shareholders, have the right to vote in the election of the Board of Directors, and in the formulation of the policies of the business and they receive dividends when the company earns any profit.

A joint stock company in order to raise capital may issue different types of shares. These may be Preference shares, Cumulative Preference shares, Deferred shares and Ordinary

<sup>1</sup> Stock is always registered and inscribed and transferable in any amount. Shares are always expressed in certain definite multiples e.g., Rs. 10/-, Rs. 100/- etc., and are often bearer securities.

shares. One type of share, however, is different from the other, as will be evident from the following.

In case of preferred shares, if there is any profit, dividend has to be paid at a fixed rate before dividend is declared on the ordinary shares. If, however, the share is cumulative preference share, and if dividend cannot be paid in bad years while the company does not earn any profit, then the unpaid dividends of these years have to be paid in good years when the company earns profit before dividend is paid on the ordinary shares. Corporations also raise fund by issuing another type of shares known as the founders' shares or the deferred shares. These are shares of low denomination and the owners of these shares are generally the original promoters of the company and are entitled to usually a large share of the profits by virtue of possessing these shares, and they thus retain effective control over the affairs of the company. These shareholders are paid dividends after the fixed rate of interest on the debentures and dividend on the preferred and ordinary shares are paid.

The ordinary shareholders have thus a claim on only the 'residual income' of the company. That is, they are paid after payments are made to the debenture holders and preferred shareholders. These shareholders, again, are not paid at a fixed rate just as the preferred shareholders are paid. The dividend they get may be large or small according as the company earns large or small profit. One more point has to be noted. In case of liquidation of the company the preferential shareholders have a prior claim to be paid from the realised assets of the company than these ordinary shareholders.

The Corporation can also raise fund by issue of bonds or debentures. Bonds are issued against company's properties, and bear a fixed rate of interest and are terminable since the company has to repay the borrowed sum after a certain number of years. Bond-holders, therefore, are creditors of the company and have no voice in its management. If, therefore, the

company goes into liquidation they have a prior claim to be paid before assets be distributed among the shareholders.<sup>1</sup>

**Advantages :** Spectacular success of big corporations in recent years in various industrially advanced countries of the world speaks volumes in support of this form of business organisation. The Joint Stock Company has become a more popular form of business organisation for various reasons. The more important ones of them being, firstly, it does not scare away men with money and ready to invest, for, the liability of the shareholders is limited only to the extent of the value of their shares. It, therefore, facilitates investment on the part of those who are ready to invest without taking very great risk or responsibility as the unlimited liability of the partnership concerns involves. Secondly, the shares issued are of different types and denominations suitable to the various tastes, temperaments and capacities of different categories of people willing to invest their money. Thirdly, the ease of transferability and marketability of these shares is a further source of encouragement to the investors. Transferability of shares secures the advantage of diffusion of risk and control of the business by abler men to whom the responsibility passes when shares are bought by them. All these positively stimulate investment and facilitate raising of large capital and thus secure the benefits of large scale production, *e.g.*, use of costly machines, scope for experiment, production at a low cost etc. Stability or continuity of existence of the company is another advantage of this form of business organisation. This facilitates planning in advance and risky experiments. Centralisation of responsibility in the hands of Directors who are generally able

<sup>1</sup> The student should know clearly the distinction between Authorised Capital, Subscribed Capital, and Paid up Capital. By Authorised Capital is meant the amount of capital which the company is authorised to raise by its Memorandum of Association. It does not, therefore, represent the actual fund of the company. Subscribed or issued capital refers to the nominal value of the shares actually issued and sold to the shareholders. Paid up capital refers to the amount actually paid by the shareholders to the corporation in respect of their shares.

and well informed men, scope for appointment of experts and highly paid managers etc., also make this form of business organisation more efficient and profitable. Finally, the shareholders can, if they so desire, remove the incapable Directors and elect abler ones in their places. This form of business organisation has thus the great merit of elasticity and, if desired, it is possible to infuse new blood in the management.

**Disadvantages :** We have already observed that in practice, the management of corporations tends to become oligarchical—a few shareholders who manage to hold a good many shares form a clique and dominate. Rampant misuse of public money by payment of high salaries to favourites, nepotism and corruption are some of the unhappy facts which hardly can be denied. Secondly, the number of shareholders of big corporations is usually very large and they live often at distant places. It is, therefore, not always practicable for them to look after the management of the business directly and check the abuses practised by the Directors, salaried officials etc. The ease of transferability of shares, diffusion of the responsibility of management among the Directors and the salaried managers who do not undertake the risk, often prevent a healthy growth of team spirit, a *spirit de corps* among those who take the risk, that is, the shareholders and the management, that is, the Directors and the salaried managers. A joint stock company is, therefore, sarcastically said to be an association of 'capital' or 'money-bags'. Not infrequently, again, numerous innocent shareholders are deceived by the Promoters and Directors who are usually posted with the inside information of the company and dispose of their shares when they apprehend any danger. Members of the public who buy these shares fall into their trap and are thus deceived. Easy marketability of shares also often leads to an unhealthy speculation and gambling in shares bringing at times disaster to the company and a large number of shareholders. Finally, when the control rests on a few big financiers,

chances are there of over-capitalisation or monopolistic combination with their attendant evils.

Whatever the defects of the joint stock company or the corporation as a form of business organisation, it is undeniable that this form is the most suitable for large scale enterprises requiring huge capital, *e.g.*, railways, shipping, etc., and also for those enterprises which are risky and necessitate considerable sum to be spent on research and experiment. The advantages of this form of business organisation far outweigh its disadvantages. Proper legislation, higher standard of public morality, keen interest of the shareholders in the affairs of the company may go a long way to remedy whatever defects it has and thus may make this form of business organisation extremely beneficial to the businessmen and also to the community as a whole.

**Holding Company :** Holding company is a device by which the control of several companies can be centralised without destroying their legal identities or affecting their 'good will' !

The object of holding company is to have a 'controlling interest' in a number of operating concerns by the purchase of majority of their shares. A holding company now-a-days includes companies which, while they have controlling interest in others, known as subsidiaries, themselves carry on business. The process is known as 'pyramiding', that is, at the base will be a large number of operating companies while at the apex will be a small Holding Company in which control over the subsidiary companies will be centralised. The holding company at the apex and a few other intermediate companies may, however, hold securities of other companies, collect dividends on these securities and control their policies, without themselves being engaged in production. Ultimately, however, the control over the companies grouped together in the pyramid rests with the persons, invariably a few big financiers, controlling the holding company at the top.

An advantage of this form of combination is that the subsidiary companies do not lose their separate existence, for, the



holding company method is a looser form of combination than amalgamation. This method, again, necessitates nothing more than a transfer of shares and hence, is less expensive.

But the real danger lies in the fact that it gives absolute controlling power to a few big financiers over a large number of companies. In fact they can, under this device of 'pyramiding', control more capital than they actually possess. The inevitable consequence of this concentration of power is that the minority shareholders of the companies have to give way if there arises any difference between them and these big financiers having majority of shares. The holding company method may, again, enable them, *i.e.*, these financiers, to withhold information from the public.

**Co-operative Organisations :** Large-scale production under the capitalist system has no doubt great advantages. Nevertheless, it has certain glaring defects too. This system of production is responsible for various grave social evils *e.g.*, unfair prices, exploitation of the labourers, unfair competition leading often to elimination of small producers, frequent frictions between labour and capital etc. Management of large joint stock companies, we have seen, often tends to be oligarchical, *i.e.*, dominated by a few, the workers having no voice in it. Hence, inspired by ethical motives and the principles of co-operation, some social reformers of the 19th century advocated the introduction of co-operative form of business organisation.

The essence of co-operation or co-operative production is democratic ownership and democratic management. Co-operative society, it has been observed, is an "association for the purposes of joint-trading, originating among the weak and conducted always in an unselfish spirit, on such terms that all who are prepared to assume the duties of membership share in its rewards in proportion to the degree in which they make use of their association"<sup>1</sup> In this form of organisation the

<sup>1</sup> C. B. Fay—Co-operation at Home and Abroad.

workers themselves raise the capital by purchasing shares and thus undertake the risk of the business which, again, is managed by themselves and the profits, if any, are divided among themselves. By thus eliminating the capitalist, the workers succeed in eliminating some of the evils of the capitalistic system of production, *viz.*, exploitation of labourers, conflicts between labour and capital, strikes, lock-outs, etc.

Co-operative societies, broadly speaking, may be of two types : (1) The Consumers' Co-operative Societies and (2) the Producers' Co-operative Societies.

(1) **Consumers' Co-operative Societies :** These are associations of consumers who raise the capital themselves by buying shares and earn the profit from the retail sale of the goods to the shareholders, *i.e.*, among themselves. Since the purchases are made at wholesale rate and the sales are made at retail rate there is always a margin, the profit, which is distributed among the shareholders usually in proportion to the amount of their purchases from the society.

A number of Consumers' Co-operative Societies may choose to combine in order to form a Wholesale Society with the object of supplying commodities to the retail societies and may also engage in production.

It is thus possible by formation of these societies to avoid unnecessary expenses on advertisement, and to eliminate the middlemen, and for these reasons the Consumers' Co-operative Societies have been largely successful.

(2) **Producers' Co-operative Societies :** These are associations formed by a group of men who subscribe the capital and are themselves engaged in production with a view to distribute the profits among themselves. The shareholders, that is to say, those who undertake the risks of the business are themselves employed by it. The employees not only have a share in the profit but also have the right to vote at meetings and thus have a voice in formulating the broad policies of the business.

The advantages of Co-operative production are, firstly, it succeeds in eliminating the capitalist and thus the exploitation of the workers and the frictions between the labour and capital, since the labourers employed are their own masters. For the same reason, that is, because the labourers are their own managers and foremen, detection of laxity and incompetence and waste becomes easier and minor work of superintendence, unnecessary. Finally, every one is conscious of the fact that he is responsible for the success or the failure of the business, that is, every one is alive to his duty and responsibility. This is no mean an advantage.

These are certainly no small advantages derivable from the Co-operative method of production. But in practice co-operation as a form of business organisation has failed. The reasons are not far to seek. While it does away with the entrepreneur class so essential for the corporations engaged in large scale production, it fails to supply the necessary talent, ability and skill from the labourers and thus there is a positive loss of efficiency. Secondly, the workers who themselves are employers, are not always the best possible masters of their own managers and foremen. The natural tendency of the manual workers to under-estimate the strain involved in conducting the business and their reluctance to pay high salaries to them is also a source of the weakness of these organisations. Finally, production on a large scale requires huge capital which it is difficult for this form of organisation to raise. This limits the scope of desirable expansion of this form of business organisation.

It is, however, true that this form of business organisation succeeds in avoiding conflict between labour and capital, a positive social danger, and inculcates a spirit of co-operation among the workers. Besides, many of the defects may be removed if honest and abler men actuated by the principles of co-operation try to make this form of business organisation a success. Education and growing enlightenment of the labourers

in business affairs, their increasing willingness to act on co-operative basis, are definite indications of the growing popularity of co-operative activities.

**Profit-Sharing :** In the scheme of profit-sharing is found a partial application of the principles of co-operation in business management. Under this scheme, the private capitalist firms, while retain their thorough control over the management of the business, agree to divide among the workers, besides their wages, a certain share of the profits when, of course, these exceed a certain minimum.

The scheme is inspired by the idea that such a device will lessen the frictions between labour and capital, increase the willingness and the zeal of the workers and succeed in attracting the workers of more than average ability and industry.

All these, if achieved in practice, no doubt will go a long way to ensure a healthy feeling of co-operation between the workers and the employers and stimulate productive ability and efficiency. But, in practice the scheme of profit sharing neither enthruses the reluctant capitalist to part with a share of his profits nor inspires the workers obsessed with the idea that they are nobody in formulating the policies of the business or in its management. Nor, again, are they satisfied with the meagre share of the profits which is usually allotted to them under this scheme.

**State-Enterprises :** Often governments or local authorities themselves engage in productive activities and own and manage enterprises. Examples of such state-enterprises are, Railways, Post-offices, etc. Necessary capital, of course, is obtained by borrowing from the public or by taxing them.

These enterprises are undertaken largely under the influence of socialistic ideas emphasising the need of expansion of state-activities in spheres of production. But state-enterprises suffer from some limitations. For instance, the salaried officials who manage these enterprises usually are engaged in routine work and lack in initiative. There being no incentive

of profit, as there is in private enterprises, men are less likely to work with that much energy and enthusiasm as they would, were there the inducement of extra reward in the shape of profit.

These undertakings are, therefore, usually less efficiently managed than the private enterprises are. Many of the handicaps, however, have been sought to be removed by the device of leaving the entire responsibility of management of these enterprises in the hands of experts, either by forming a Committee or a Board.

We have thus reviewed, in brief, the principal forms of business organisation. We postpone for the present the discussion of Monopoly and Combination or Consolidation and Integration of Industries. These will be taken up after we know a few more things about the Large-scale Production, Division of Labour and Use of Machines, etc.<sup>1</sup>

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<sup>1</sup> See Ch. II.

## CHAPTER 10

### PRODUCTION ON A LARGE-SCALE

**Division of Labour :** Organisation of production on a large scale necessarily depends upon division of labour. The finished products we buy have behind them the 'specialised' work of innumerable workers, each of whom performs some specialised task and is responsible for only one stage in the process of manufacture. Were it not so, large scale production would be impossible. In primitive societies, therefore, when men produced things from the start to finish, production on a large scale was not possible. Leaving other considerations aside, wastage of time and inability to use machinery were there to check the volume of production. Division of labour thus, may as well, be termed as 'specialisation.'

By simple division of labour we mean division of occupations. Here a workman confines himself to the making of a commodity from start to finish, *e.g.*, a cobbler making a pair of shoe. But when the work of shoe-making is sub-divided into several operations, say, seventy or eighty, performed by distinct sets of workmen, division of labour no longer is simple, it has become complex. In simple division of labour, that is, when a worker produces a commodity from start to finish, there is 'specialisation by *product*' and there is 'specialisation by *process*' when each worker is responsible for one stage only in the process of manufacture.

Just as in complex division of labour each labourer is responsible for only one stage in the process of manufacture and thus 'specialises', so different localities of a country or even different countries themselves may 'specialise' in producing only those commodities for which the nature has made them most suited. This is known as Territorial or Geographical division of labour.

**Limits to Division of Labour :** There are, however, certain limits to division of labour. For instance, extreme division of labour and the consequent large volume of production would definitely not be profitable if there is no 'market' for the products. The advantage of division of labour is thus limited by the extent of the market. Again, the extent to which the process of manufacture can be split up, that is, in other words, how far division of labour can go, depends also on technical considerations. Thirdly, if the work is occasional instead of being continuous, then the labourer would be reluctant to confine himself to that single occupation and will seek employment in other occupations which means the amount of advantage derivable from division of labour is not derived. Greatest amount of advantage from division of labour is only obtainable if the labourers are kept engaged continuously. In manufacturing industry, the work is continuous, hence, there is more scope for division of labour while in agricultural industry the scope is less, since the work is not continuous. Often dearth of capital may obstruct reasonable division of labour. This is specially so in industrially less advanced countries where there is paucity of capital. Thus division of labour depends also on the amount of capital available at any given time.

**Division of Labour : Its Advantages :** The greatest improvement, observes Adam Smith, in his Inquiry into the Nature and Causes of the Wealth of Nations, in the productive powers of labour and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labour. The truth of the statement can hardly be questioned. The more important advantages of division of labour are the following :

Different men have different capabilities. Some are physically strong, others are weak. Again, some are more intelligent, while others are less intelligent etc. Division of labour makes it possible to give each of these workers work according

to his capabilities, both mental and physical. Waste of human labour can thus be avoided by division of labour. For, various categories of men, who would otherwise find it difficult to find employment, get suitable employment when there is division of labour. The loss resulting from the mishandling of machines by specialised workers is also minimised.

Secondly, practice, it is said, makes a man perfect. Division of labour, since it necessarily implies that each worker performs one specific task in the process of manufacture of a thing, certainly increases the worker's skill and dexterity.

Thirdly, division of labour ensures economy both of implements and time. Since each worker, when there is division of labour does only one specific task, he requires fewer instruments than he would, were he to perform different tasks necessitating the use of various types of machines. And that obviously would mean that at the time when he would be engaged in one machine the other machines would remain idle, that is, the capital invested in them would remain idle. If there is division of labour and each worker uses one set of tools, not only the waste of instruments and capital may be avoided, the same set of machines may also be utilised fully.

This also implies saving of time. For, one has to learn only one occupation or rather a single part of the whole process of production. The period of apprenticeship is thus shortened and this means saving of time. Secondly, it saves the time which the workers would necessarily lose in frequently passing from one job to another or from one operation to another.

Finally, division of labour or specialisation facilitates greater use of machinery. For, division of labour implies that the whole process of manufacture is split up into several successive operations most of which involve automatic repetition of identical movements and, hence, can be done by machines. Division of labour or specialisation thus facilitates greater use of machinery and ensures larger production at a lower cost.



It also gives scope for improvements and inventions, for, when the process of manufacture is split up into several simple operations, intelligent workmen who watch every operation carefully may suggest improvements and, in this way, inventions are made and machines are substituted for human labour.

**Disadvantages :** Division of labour, however, is not always an unmixed blessing. There are, in fact, certain dangers of specialisation or division of labour which we cannot too readily ignore. Some of these are discussed below.

Specialisation, by narrowing the task of a man, narrows the man's capability too. It stifles the worker's initiative and judgment and reduces him to the level of a machine. Change or variety of work is a source of relaxation of mind ; it relieves the mind from the boredom and strain necessarily one suffers if one has to perform the same identical operation all day long.

Specialisation, again, involves the risk of unemployment. For, the worker who specialises in one operation in the process of manufacture of a thing becomes practically incapable of doing any other work. If, therefore, for whatever reason, *e.g.*, change of fashion, invention etc., the demand for the article he is engaged in producing falls, he is thrown out of employment since the work in which he has specialised, is no longer required. Magnitude of these risks can be imagined when we remember that, in these days, production is undertaken much in advance in anticipation of demand which may, meanwhile *i.e.*, before the product is finally ready for sale, fluctuate.

Specialisation also "loosens the ties by which the community is bound together. Specialists have their peculiar background. They live in a world of their own, cut off from other specialists by their training, their habits, and above all by their interests. There is thus a constant danger of sectionalism : the specialists entrench themselves in organised groups in defence of their interests, and often in disregard of the interests of the community."<sup>1</sup>

<sup>1</sup> Cairncross—Introduction to Economics, p. 48.

There are thus certain evils associated with the division of labour or specialisation. But the advantages the community derives from the division of labour are greater than the disadvantages it suffers. "However the community were organised," observes Benham "the wants of those in a position to make their choice effective could be satisfied much more fully, from a given supply of means of production, by taking full advantage of division of labour."

**Machinery and Efficiency of Labour :** Just as division of labour makes labour more efficient and facilitates production on a large scale, so also the efficiency of production largely depends upon the use of machinery. These two go hand in hand. Use of machinery calls for higher intelligence and responsibility of the worker and contributes to his efficiency in the following ways :—

Use of machine largely relieves the strain of the human muscle since the work which is too heavy to be performed by manual strength is done by machines.

The work is done much faster by machine than it can be done by human labour. Similarly, the work which is extremely delicate is done quickly, accurately and untiringly by machines.

Machines, in a way, help to get rid of the monotony of work since the work which is uniform and monotonous is constantly being taken over by machines. Use of machines thus relieves the monotony and also saves time and thus paves the way for more leisure or higher wage, by helping the labourers to be more efficient.

Besides increasing man's command over nature and the volume of production, the use of machines has other advantages too. For instance, machinery has diminished the barrier between different industries and thus has helped the labourer. Similar machines are used in different trades, so it is often

<sup>1</sup> Benham—Economics (4th Edn. p. 119).

easier for the labourer to find job. Volume of production is increased by the use of machines in one more way, *viz.*, the parts being exactly interchangeable, greater use of machines and hence more production is also possible. The system of interchangeable parts in machines, while it increases the use of machines, also promotes efficiency of production. Greater use of machines, again, necessarily reduces the cost and the community stands to gain when the commodities are sold at a cheaper price. Standardised goods can be produced only with the help of machines.

**Disadvantages of the Use of Machinery :** Use of machinery on a large scale has often been looked upon by some thinkers, *e.g.*, Ruskin, Carlyle etc., with great disfavour for certain evils which are generally associated with the system of production on a large scale with the use of machinery. These are mainly the following :—

By displacing human labour, introduction of machinery invariably throws a large number of men out of employment and thus is detrimental to the interest of the labourers, besides the other social evils, *e.g.*, corruption, political agitation, unrest among labourers, friction between labour and capital, etc., which are associated with unemployment.<sup>1</sup>

Introduction of machinery, again, is said to be at the root of various other evils of capitalistic system of production, *viz.*, employment of women and children, degradation of health and morals of the workers working in most uncongenial atmosphere in factories and living in slums, the growth of crowded industrial towns, etc., etc.

It should, however, be noted that these evils are not the consequences of use of machinery as such but rather are the results of the abuse of machinery by the employing class, the capita-

<sup>1</sup> Introduction of machinery, it should be noted, throws men out of employment for the time being. But later it creates more avenues of employment. For, introduction of machinery results in lower cost of production and therefore, cheaper price. Cheaper prices stimulate demand and augment savings. Savings help creation of capital and paves the way for brisk business activity which necessarily means more employment.

lists, who often are more interested in increasing their profits than the welfare of the workers. Appropriate social legislation with a view to increase the welfare of the working class will succeed in removing many of these evils. Strong public opinion and people's higher standard of social conduct will also go a long way to prevent many of these abuses. We cannot, therefore, think of doing away with machinery since, the greater the progress of industry the higher will be the people's standard of living and the more prosperous will be the community as a whole.

**Economies of Large Scale Production : Internal Economies :** When an individual firm grows in size and produces larger volume of output certain economies accrue to it. These are economies of production on a large-scale and any firm when able to produce on a large scale enjoys these benefits independently of the actions of other firms. These economies, known as Internal economies, may broadly be grouped under the following heads :

**Technical Economies :** Benefits of electrically driven, costly and up-to-date specialised machinery can be enjoyed by only large firms producing on a large scale. The small establishments neither can afford to use these machinery, nor, it is profitable for them to do it, since they may not keep them in continuous use and, therefore, cannot derive the full advantages from their use. Secondly, use of large machines has some purely mechanical advantages, for instance, it diminishes the losses which result from frictions, evaporation or from cooling. It also reduces the cost since the cost of operating large machines is cheaper in the sense that, although the output increases when large machines are used, the number of operators required to operate them is not necessarily larger than is required to operate smaller machines of the same type. It is also cheaper to construct large machines. Thirdly, the advantages of division of labour, of employment of highly paid experts, etc., can be obtained only when a firm produces on a large scale. Fourthly, the cost is reduced or certain economies accrue in

other ways too. For instance, a large firm can avoid waste and thus ensure economy by the use of by-products which the small establishments cannot profitably utilise. By-products are utilised to a considerable extent in meat packing industry in U.S.A. Finally, the advantages and the economies which result from linking of different stages of manufacture can be enjoyed by large establishments only. A small firm, for example, has to depend on others for the supply of essential raw materials, etc. This dependence is risky because the supply may not be regular. A large firm, on the other hand, is in a position to avoid these risks by undertaking to produce the raw materials or semi-finished goods it requires. A wire less factory, for instance, may decide to make screw nails it needs and thus avoid the risk of uncertainty of supply. This also saves time and cost of transport.

**Managerial Economies :** In this age of specialisation, the services of specialists are called for in every sphere. More so, in the realm of business, where competition is keen and the large firm has an advantage over the small firm because it can employ specialists by paying high salaries and thus ensure efficient management. The work of management may be split up into separate departments and each of these departments may be placed under the supervision of experts. The owner of a small establishment has to do several things himself, *viz.*, he has, for instance, to make plans, to superintend the different departments, to go here and there in connection with the purchase of raw materials or sale of finished products, etc. All this is likely to obstruct efficient production. But in a large establishment the owner or the entrepreneur may concentrate on more important questions of formulating policies or on difficult work of organisation and leave the routine work and the details to subordinates. These economies in management thus can be secured only when the production is on a large scale .

**Marketing or Commercial Economies :** There are certain bargaining advantages of a large firm. For example, it gets

a 'preferential treatment' from those who sell raw materials to it. This is possible because it enjoys great reputation in the market. Besides, it buys raw materials in large quantities and fairly regularly and so, buys at a favourable rate. By effective propaganda, by arranging its own transport system and by employing expert sales officers, etc., a large firm can secure reduction in selling costs too. Buying and selling in large quantities do not necessitate employment of proportionately large staff. The same staff may be used to capacity. Some economy is also possible in this way.

**Financial Economies :** A large firm, because of its standing and reputation, is in a position to raise large capital by selling shares and issue of debentures to the public. It may also borrow from banks at a favourable rate of interest. The small firm is handicapped since those who have money and are willing to invest, would prefer to invest in large and established firms than in small and less known firms because of the lesser risks.

**Risk-Spreading Economies :** A large firm producing a large variety of goods and for different markets is less vulnerable to fluctuations in demand. A fall in demand in one market may be compensated by a rise in it in another or a fall in demand for a particular variety of product may be compensated by a rise in demand for another variety it produces. When we take these advantages into consideration, the large firm definitely stands on a better footing than the small firm.

We have discussed above the economies which arise when a firm produces on a large scale. These Internal economies, can, as we have seen, be grouped under these heads, *viz.*, Technical, Managerial, Marketing or Commercial, Financial and the economies resulting from distribution of risks or Risk-Spreading economies.

**External Economies :** Besides these Internal economies production on a large scale is favoured by some External economies too. These are, however, not the results of the increase

of the size of any individual firm ; but are made available to all the firms in an industry because of the growth of the industry as a whole and also because of the growth of subsidiary industries. Some of these advantages are discussed below.

The growth of any industry results in a larger demand for the machinery which are used by each individual firm engaged in production in the industry. These machines, therefore, will now be produced on a larger scale than before, and so will be produced at a lower cost. The individual firms will buy these machines at a lower price and thus will derive benefit from the growth of the industry as a whole.<sup>1</sup>

The firms in the industry, when concentrate in any particular area, also derive considerable mutual advantages in various other ways, *e.g.*, availability, as well as training of skilled labour, facilities of cheap and better transport, dissemination of useful information through the publication of Trade Journal, etc. These are the advantages which they enjoy when they are localised in a particular area and are said to be the economies of concentration.

Substantial advantages are also derived by all these firms when, as a result of the growth of an industry in a locality, subsidiary industries, *e.g.*, for supplying raw materials, spare parts, etc., grow in the area.

**Limits to the Expansion of a Firm :** We have seen that various economies—the economies of scale—favour production on a large scale. But to maximise these economies no individual firm can go on expanding its size indefinitely. There are a number of obstacles which limit the growth of the size of an individual firm. These, in brief, are the increasing difficulties of management, the increasing risk of fluctuations and uncertainties of demand, the difficulties of raising more and more

<sup>1</sup> While the firm manufacturing machines manufacture a larger number of machines, certainly it enjoys the benefit of certain internal economies of large scale production and, therefore, produces at a lower cost ; but in buying these machines at a lower price all the individual firms requiring these machines enjoy the benefit of external economies. It is thus clear that the internal economies of one industry may be the external economies of another.

capital to finance the business etc. These are some of the real difficulties which limit the increase in the size of any firm indefinitely.

**Advantages of Small-scale Production :** Production on a large scale has no doubt some positive advantages which the small producer cannot expect to have. Nevertheless, the small firm also enjoys certain advantages peculiar to it only. For example, the problem of co-ordination and supervision, when the size of the firm is small is not so baffling as it is in large establishments. Efficient management of the business is possible if the firm is not large. In a small firm a personal relationship grows between the employer and the workers and this prevents frictions, strikes etc. In large firms with thousands of workers no such cordial relationship can grow and thus frictions between the employers and the workers, strikes etc., are more frequent. The small producer is in an advantageous position because he can pay attention to the details, can cater to the needs of individual customers and above all, can take prompt decision and can go ahead with his own plan without being obstructed by others. His enthusiasm, initiative and imagination surely contribute to a large extent to the success of the firm.

**Localisation of Industry :** We have observed, while discussing division of labour, that just as each labourer, when there is division of labour, 'specialises' in performing a particular task, so different localities of a country may 'specialise' in producing those commodities for which the nature has made them most suited. This geographical division of labour leads to the growth or location of some industries in some particular places and others in some other places. And when particular industries concentrate in particular regions the industries are said to be localised in those regions, as for example, the jute manufacturing industry is localised near Calcutta or the cotton textile industry is localised mostly in Bombay and Ahmedabad. Localisation of industry thus means concentration of a particular industry in a particular region.



**Factors Influencing Localisation :** Several factors influence the localisation of some industries in some particular places, the most important one of them being, of course, the fact that the factors of production are not distributed in equal proportions over the surface of the earth. There are, that is to say, some natural advantages in some places for the growth of some industries there, as for example, Bombay and Ahmedabad are advantageous for the growth of cotton textile industry. The climate, the character of the soil, existence of mineral and power resources within easy access, etc., are other factors which influence the localisation of particular industries in some particular places. Accessibility to these minerals and the sources of power reduces the cost of production and naturally, therefore, those areas allure industries, where these are available in plenty. Similarly, industries grow in those places where there are ports, navigable rivers, seas, etc., which facilitate transport of commodities at a low cost. Abundant and cheap supply of labour and existence of a large market also are important causes leading to the location of industries in some places. Not infrequently, industries grow in towns because of the existence of wide markets for the products.

Inertia on the part of the business men is another cause of location of industries in some places. Once an industry is established in a particular place and earns reputation each firm engaged in the industry enjoys the reputation and also derives certain other benefits from the existence of other firms in the area *e.g.*, supply of skilled labour, etc. These advantages allure businessmen to start their firms in that area instead of taking chances elsewhere. Watch-manufacturers, for instance, would prefer Switzerland than any other place. The inertia or the momentum of an early start is thus another factor which influences the location of certain industries in certain places.

Finally, political causes often influence localisation of industries. In Murshidabad of Bengal, for instance, the silk industry thrived positively under the patronage of the rulers of

the place just as under the protection of William the Conqueror, the cloth industry was established at Norwich.

**Economies or Advantages of Localisation of Industries :** A great advantage of localisation of industry is that the products of the industry find a good market at reasonable prices, because of the reputation the place enjoys. Swiss watches, for example, have a good market, because of the reputation of Switzerland in watch manufacturing. Secondly, localisation of industry is advantageous both for the employer and the labourer, because the former is sure of regular supply of skilled labour in the area where the industry is located and the latter, having the necessary skill, is sure of getting employment since there is always a demand for skilled labour in the area. An additional advantage derived from the localisation of industries is the fact that the children of the skilled workmen, engaged in the industry, learn the trade from their childhood, more or less unconsciously and this also secures regularity of supply of skilled labour for the industry.

Thirdly, banks and other appropriate financing institutions, Stock exchanges, etc., are established in the area and this facilitates supply of capital to the firms engaged in the industry and also marketing of their securities.

Fourthly, localisation of an industry in any place leads to the growth of industries subsidiary to it in the area and these subsidiary industries help the main industry in various ways, *e.g.*, by supplying machinery, raw materials, by providing means of communication etc.

Finally, when an industry is located in any area, the firms engaged in the industry may derive considerable benefits by mutual discussion, dissemination of trade information by publication of Trade Journal etc. Emergence of new ideas about business organisation, possibilities of invention of machinery, etc., are also no small advantages of localisation of industry.

**Disadvantages :** There are, however, certain serious disadvantages of localisation of industries in some particular

places. For instance, the fortune of the people of the area where any industry is localised becomes bound up with the fortune of the industry. That is, if the industry suffers, say, for want of supply of raw materials or due to a fall in the demand for the product, then the workers of the area will naturally lose their jobs. What is worse even, they may not get suitable jobs elsewhere, since they have specialised only in one type of work. All these positively increase the sufferings of the people. Establishment of different industries in the areas, may, however, to a certain extent, mitigate their sufferings.

Another disadvantage of localisation of industry is that it necessarily increases the demand for a particular type of skilled labour. This may mean, that only the strong and able-bodied young members of the workers' families get employment, while the female members and the children do not find work, since they neither have the strength, nor the skill, and intelligence. But unless the wages are sufficiently high so as to enable the workers to maintain their families, they are not likely to stick to their work. Hence, on the one hand, high wages may have to be paid, which naturally would raise the cost of production and, therefore, the price, while on the other, the female members, or the children of the workers remain idle, since they do not get suitable employment. To take an illustration. In Iron and Steel industries, there is demand for only strong and able-bodied men. So, while these men get employment, the womenfolk and the children do not get work. Unless, therefore, the wages are sufficiently high, the workers will not be able to maintain their families. The employers, thus, have to pay high wages by raising the price of their products.

These difficulties, however, can be removed by the establishment of supplementary industries. Cotton mills, for instance, may be established as a supplementary industry, to give employment to women and children, where Iron and Steel Industry is localised.

## CHAPTER 11

### INDUSTRIAL COMBINATIONS

**Motives Behind Industrial Combinations :** Firms, we have seen, expand mainly with a view to increase their profits, by taking several advantages of large-scale production, or, in other words, by reducing their costs of production. The motive to augment profit, is also the most powerful motive, which leads to combination of several firms under a single control and management. Self-defence, elimination of competition, control over the supply price, lust for monopoly profits and industrial leadership and power, possibilities of raising larger capital on the Stock Exchange, etc., are also other motives which lead to industrial combinations.

Such combinations, however, are more likely, when the number of firms engaged in an industry is small ; and instead of being scattered over a wide area, they are concentrated in a particular region and are engaged in producing certain standardised product and none of them is either very large or powerful.

**Types of Industrial Combination :** Industrial Combinations may range from very loose agreements, entered into by some firms, say, for fixing the price of the product, or, regulating the volume of output, at one end, to outright amalgamation of individual firms, at the other. Control over the price, the volume of output, and the methods of production, etc., becomes more and more thorough at each stage.

To avoid competition among themselves, and to secure certain specific advantages for them, individual firms may enter into informal agreements among themselves to fix the price of the product they produce, or to divide the market among themselves, *i.e.*, by the 'territory pool' device. These are some very loose type of agreements and can hardly be said to be industrial combinations, since, there is no official organisation entrusted

with the task of carrying on policy. Such agreements, again, are necessarily short-lived, since, each firm remains independent and retains complete authority over its internal organisation, and may, therefore, bring dissolution at any moment, by violating the terms of such an agreement, for some particular gain of its own.

**Pools :** These are also loose associations of competing producers who agreed to fix a quota, or, a certain maximum output, for each of them. The profits are first pooled together, and then distributed among them, in accordance with some plan previously agreed upon by all of them.

Pools, like the other agreements, are also loose associations, and thus, suffer from similar defects. Freedom of individual firms in their internal organisational affairs is a source of weakness of this type of agreement.

**The Cartel :** The Cartel is a loose form of industrial combination which allows substantial independence to the individual firms joining it. These firms retain their separate individuality, and enjoy freedom regarding their internal organisation. Only on certain particular points, *e.g.*, regulation of output of each firm, or, fixing the price of the product, etc., they come to an agreement.

Thus, the Cartel fixes the quota, or the output of each individual firm, and also the price of the product, leaving the management of the firms entirely in their own hands. The business of selling, however, is entirely managed by the Cartel, which acts as a 'selling agency.' That is, the orders are received by it, it fixes the price and effects the sales. The profits are distributed among the firms in proportion to their output.<sup>1</sup>

<sup>1</sup> Often, particular areas are allotted to individual firms *i.e.*, the market is divided among the members. And there does not exist any common selling agency, or bureau, to receive orders and effect sales, since the division of zones prevents competition among the firms. This is, of course, a looser form of combination.

The Cartel is a typically German form of industrial combination, although, now they are found every where, and there are some Cartels even international in their scope, *e.g.*, the Syndicate controlling the copper production of the world. In India, the Indian Sugar Syndicate and the Cement Marketing Board of India, are good examples of Cartel.

As a form of industrial combination, a Cartel is more comprehensive, in the sense, that all the firms in the industry come to an agreement, may be on certain points, *e.g.*, fixing the quota, or, the price, etc. and is less expensive to form since no rival firms need be bought. On the other hand, it is unlikely, that in forming a Trust, all the firms in the industry will agree to amalgamate. But the Cartel is a more unstable form of combination, because the firms retain their separate existence and also independence in their internal organisation and, may therefore, violate the terms of the agreement and thus lead to the dissolution of the Cartel. A Cartel, again, is essentially a marketing organisation, and, therefore, like a Trust, cannot secure the economies of the large-scale production.

**The Trust :** When the leading firms in any industry sink their individual identities, and combine together, or, when a single firm absorbs all the other firms in the industry, the firm emerging as a result of such amalgamation, is known as a 'Trust'.

Originally, by trust was meant an amalgamation of firms in an industry, who transferred their shares to a Board of Trustees, invested with the power and the responsibility of controlling the whole organisation. Certificates, known as Trust Certificates, were given to these component firms. The Trust, or the industrial combination in this form, was declared illegal in U.S.A. But now, however, any big combination formed by an amalgamation of firms sinking their individual identities is known as a Trust.

There are certain advantages of this form of industrial

combination. Firstly, it is not a loose form of combination like the others since the individual firms do not retain their separate identities, and, therefore, is more stable than those. It formulates policies, organises both production and marketing, and thus secures all the advantages and economies of large scale production.

There are, however, certain disadvantages also. For instance, a very large sum of money may have to be spent to secure the amalgamation of rival firms. The merger of these rival firms often prove too costly. Again, the amalgamation of the firms may make the organisation so large in size that it becomes unwieldy and uneconomic.

**Different Methods or Directions of the Growth : Types of Integration :** There are four different processes of integration. A firm, therefore, may grow in either of the four different ways, according as it chooses any of the four types of integration, viz : Horizontal, Vertical, Lateral and Territorial integration.<sup>1</sup>

**Horizontal Integration :** The growth of a firm is horizontal, when it combines with other firms producing or selling similar products. Horizontal integration, thus, is a merger of firms producing or selling similar products into a larger business establishment under the control of a single management. Again, it may take the form of an extension of plant, without a change of the product or the process. An iron-smelting company, for instance, may combine with other such companies ; or, may build a larger number of blast furnaces. The Associated Cement Companies of India Ltd. is an example of horizontal combination in India.

Horizontal integration is the usual method of growth of the size of a firm. The motives which lead to such combination are : to secure the economies of large scale production, that is, the economies of the scale and to eliminate the competition of rival firms, and, thus to ensure monopoly profit.

<sup>1</sup> It should, however, be noted that the growth is rarely one dimensional. Rather, it takes place along several of these routes simultaneously.

**Vertical Integration :** Vertical integration means a union of a number of firms in an industry, engaged in the production of a thing at different stages, under one management. The idea behind such integration, thus, is to unite the successive stages in the production of a thing, from the start to finish, under one management. In India Messrs. Tata Iron and Steel Company which own deposits of iron ores, coal mines, blast furnaces, steel works, etc., and manufacture pig iron and steel serve as an example of vertical integration.

Regular supply of raw materials, the economies of large scale production, and of unified control and management of the successive stages of production are the powerful motives which lead to this type of integration.

**Lateral Integration :** A firm may decide to manufacture new products, that is, products of different variety and of new styles and may open new departments or may start a branch factory for turning out these additional products. More often, however, a subsidiary company is formed for manufacturing these products. That is, the firm grows laterally by extending the list of the products it manufactures. Lateral integration, thus means manufacturing additional products or styles of products. When, for instance, steamships, refreshment rooms, etc., are run by a railway, we get an example of lateral extension.

**Territorial Integration :** A firm may grow by territorial integration, that is, by opening its branches over a wide area or by uniting with the firms in other parts of the country. But instead of having a number of local firms in different places, concentration in one place is, however, now considered more advantageous in view of the abundant facilities which can be secured and also because of the considerable reduction in transport costs in these days. But for the firms engaged in transport or distribution, territorial integration is surely a more convenient and easier method of growth.

**Rationalisation of Industry :** Rationalisation briefly means a scientific scheme of cost-reduction and rational organisation of an entire industry. The idea of rationalisation,—a



process of cost reduction by elimination of all wastes, and introduction of modern and scientific methods of production, or, in other words, the idea of overhauling the industry with a view to ensure proper adjustment of production to consumption, and to reduce the cost in every possible way, was popularised during the inter-war period, when the rising cost, severe inflation, in short, the economic chaos, resulting from the war, made the people feel, as never before, the need of scientific re-organisation of the industry.

The scientific scheme of cost reduction, or, rationalisation, is the "method of technique and organisation designed to secure the minimum of waste, in effort and material; added to that, the scientific organisation of labour; the standardisation of materials and products, and the simplification of processes and physical improvements in the system of transport and marketing."—(*Sir Arthur Balfour*). The fundamental idea, thus, is to make the industry most efficient by eliminating all wastes and securing proper adjustment of production to consumption. To achieve this object not only the methods of production should be most scientific but also, if necessary, the weaker and inefficient firms in the industry, *i.e.*, those which are considered as uneconomic, should be closed down and others should be amalgamated. Provision should be made for necessary capital and the units should be properly equipped as regards plants, machinery, materials and methods. Scientific management of labour and efficient marketing, are also essential for successful rationalisation. Thus, the transformation of the industry, as rationalisation denotes, is based on reason throughout with a view to ensure continuous production, specialization, replanning of plants and equipments. It also includes replanning of the labour methods on the basis of observations and estimates having rational and strictly scientific basis.<sup>1</sup>

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<sup>1</sup> Rationalisation, however, is not the same thing as scientific management. Scientific management does not necessarily lead to an amalgamation of firms nor implies conscious planning as rationalisation does, with a view to ensur-

The five essential features of rationalisation of an industry, as has been observed by Prof. Stanley Jevons, are :

1. Amalgamation or unified control of companies and elimination of weak concerns, so as to secure control of the market, and thus facilitate on the basis of monopoly profits the raising of the large amount of new capital necessary ;

2. Specialisation of plants and their re-equipment so as to reap the maximum economies of large scale production, both in respect of machinery and of organisation ; and the building of large new plants for products in the manufacture of which the utmost economy can be reached only in this way ;

3. The planning of each plant for continuous production with specialised machines and tools ;

4. Specialised management, largely functional, including careful buying, grading, and mixing of raw materials ;

5. Perfection of manual operations on the basis of time and motion studies, with necessary instruction.

All these are ways of reducing either prime or supplementary cost ; their relative importance varies according to the product and prevailing conditions.<sup>2</sup>

**Advantages of Rationalisation of Industry :** Rationalisation secures considerable advantages for the industry as a whole. In the first place, it is easier to raise large amount of capital for large industrial organisations than for small ones. Rationalised industry has, therefore, the advantage of raising large capital necessary to finance it. Secondly, provision for best and efficient management and research, which means con-

ing efficient production and elimination of wastes having in view the industrial economy of the nation. It is more a matter of technical organisation of a firm to eliminate waste and thus to reduce cost and increase profit. By rationalisation is meant, as observes Meade, "action taken by the state or by the majority of producers in a particular industry to bring that industry under a single control."

<sup>2</sup> Prof. Stanley Jevons—The Second Industrial Revolution—Economic Journal, March 1931.

siderable expenditure, can also be made because of the availability of sufficient capital. This leads not only to an increase in the efficiency of production but also secures the numerous advantages of large-scale production *i.e.*, the economies of the scale (*e.g.* economy resulting from the use of by-products, advantages of division of labour, etc.). Finally, the reduced cost benefits the society as a whole for, it means cheaper price of the commodity. •

**Disadvantages or Difficulties of Rationalisation :** There are, however, certain difficulties of rationalisation of industry. Introduction of efficient plants and machinery will, it is pointed out, necessarily throw a large number of men out of employment.

It should, however, be remembered that it is only at the initial stages that unemployment is likely. For, rationalisation, by introduction of scientific methods of cost reduction, increases the profits of the industries which may again be invested in business and thus lead to more employment. Similarly, the cheaper price of commodities will necessarily leave some surplus in the hands of buyers, which may lead to an increase in their propensity to consume and thus give fillip to production indirectly. Hence, in the long run rationalisation is not detrimental to the interest of the labourers.

Secondly, integration of industry may ultimately lead to monopolistic combination and unfair prices may be charged, which, it is not possible for the individual firms to do in a competitive market.

Thirdly, rationalisation requires high grade ability in business management. The success of rationalisation depends on the leadership of the Captains of the industry ; which may not be always forthcoming. The risk of non-availability of able businessmen continuously is no small one and mere amalgamation of business units without efficient business management neither can be said to be true rationalisation, nor, has the advantages claimed for it.

## **BOOK IV**

### **CHAPTER 12**

#### **THEORY OF VALUE : SOME NECESSARY CONCEPTS**

**Exchange: Its importance :** Value, we know, is a relation in exchange or, a ratio between the things which are exchanged. The value of a thing simply indicates how much of other things may be given for it.

Now a days, however, exchanges do not take the form of direct barter, that is, goods are not bartered simply for goods. Instead, we convert goods into money first, and then buy the goods we require, *i.e.*, again convert the money into other goods we want. Such conversions of goods into money and money into goods necessarily imply certain prices at which the goods are converted. These prices are thus values expressed in terms of money, that is, the medium of exchange.

Direct barter is possible in the early stages of development of a community, when each family produces almost every thing it requires for consumption and, therefore, exchange, as we understand it now, is not so important in such primitive communities; nor is money indispensable as a medium. When, however, a community is developed and there is division of labour, or specialisation, that is, when men do not work for producing the goods that they are in need themselves, but are engaged only in producing those goods for which they are most suited, the function of exchange becomes important. Men or even nations now-a-days need not produce the things they want, for it is to their advantage to produce only those things for which they are best fitted. Things they want can be had in exchange of the things they produce. Exchange, thus facilitates best use of productive capacities, both of the individuals as well as of the nations, and makes for progress.

In principle, however, there is no difference between money exchange and barter exchange. The purpose of the Theory of

Price is to explain how the exchange-value is determined in terms of the accepted medium of exchange, that is, money. "Economics" it has been observed, "does not limit itself only to money-problems but studies exchange-problems of all kinds."<sup>1</sup>

**Market :** Exchange naturally presupposes the existence of a market. But what is a market in economics? Market, in economics, does not refer to a particular place in a town or a village, as we ordinarily understand by the term, where goods are bought and sold. By market in economics is meant the "net work of dealings in any factor or product between buyers and sellers." It refers to a number of buyers and sellers of a commodity or commodities, brought into direct competition with one another for the purpose of exchange. What, therefore, constitute a market in economics, are a group of buyers and sellers and the existence of effective competition among them. The buyers and the sellers should, however, be in such free intercourse with one another that the prices of the commodities bought and sold should tend to equality. In other words, a single competitive price is an essential feature of a market in economic sense.

The productive activity, then necessarily depends on the requirement of the market round which the whole economic system ceaselessly revolves.

**Classification of Markets:** Markets may be classified according to space, the area of the market being determined by the area of competition, *i.e.*, it may be local, national or international, according as the competition is confined within a locality, within a nation, or, is world wide. Or, again, markets may be classified according to the length of time which is taken into account, that is, it may be, as Marshall has suggested, short period, moderately long period, and very long period.

If the length of the period taken into account is short, the supply of a commodity at hand is fixed; the forces of

<sup>1</sup> Cairncross—Introduction to Economics, page 2.

demand will, in this case, determine the price ; if the period is longer, the supply will be influenced by the cost of producing the commodity in question ; thirdly, if the period is very long, the cost, (that is, the cost of producing the commodity) will be influenced by the cost of producing the labour and other material things required for producing the commodity.

**Perfect and Imperfect Market :** A market is said to be perfectly competitive, when in the first place, there are a large number of buyers and sellers of a commodity none of whom can influence the price by his independent action ; secondly, when there is but one ruling price of the commodity and the units are identical with one another and finally, the buyers, keen on buying at the lowest price, are aware of the prices charged by the different sellers.

That is, if a higher price is charged by any seller none will buy from him. Naturally, therefore, he has to charge the same price as is charged by others in the market. Of course, in case of a large area, allowance must be given for transport charges, or expenses of delivering the goods to the buyers in different parts, according to the distance and the cost of delivery.

The market is said to be imperfect, when the number of sellers is not large and each is in a position to charge different prices from different buyers, or, the buyers are ignorant of the different prices charged by different sellers, or, again, when the units of the commodity are not believed to be similar in quality.

**Conditions Determining the Area of the Market :** The extent, or the area of a market, depends on various conditions. These are, firstly, the nature of the commodity in question. For instance, the market will be wide, if the commodity is durable, while it will be narrow, if the nature of the commodity is perishable, *e.g.*, milk or vegetables. Secondly, commodities which are portable, and can be suitably graded and

sampled, have a wider market than those which are neither portable, nor can be properly graded or sampled. Thirdly, without a considerable demand, it is not possible for a commodity to have a wide market. A wide demand and easy means of communication between the buyers and the sellers are essential conditions for having a wide market for a commodity.

Commodities, like gold and silver, therefore, we find, have a world-wide market because they are cognisable, portable, durable and widely demanded, whereas, the markets for milk, fish, etc., are local, since these things are neither durable, nor portable nor it is easy to have proper sampling and grading of these commodities.

**Laws of Return :** We have already discussed the Law of Diminishing Return. It is now necessary to discuss the other two laws of production, *viz.*, the Law of Increasing Return or Decreasing Cost, and the Law of Constant Return or Constant Cost.

**The Law of Increasing Return :** The Law of Increasing Return operates in an industry when an increase in the application of one factor raises the total output of the industry more than proportionately, that is, an increase, of say, 5 per cent in the application of one factor raising the total output by more than 5 per cent.

It may be asked, how is it possible? It is possible because, firstly, the factors of production often consist of indivisible units. Take an illustration : suppose, for example, that a plant is set up to produce electricity to be consumed by a growing community. Now, when it is set up, the community consumes, for instance, only 500 units, whereas, the plant has a capacity to produce 2000 units. When, therefore, more electricity will be consumed, as the community will grow in number, the cost per unit of producing electricity will diminish. In other words, there will accrue certain economies of the scale, *i.e.*, economies of large scale production. The average

cost of all the units produced will, therefore, be falling (assuming, however, that meanwhile other factors necessary can be increased at constant costs) until the plant,—an indivisible unit—is used to its capacity, that is, until it produces 2,000 units of electricity.

Secondly, production on a large scale means scope for increased specialisation of the units of each of the factors employed, which, when the production is on a small scale, is not possible. Such specialisation of each unit of the factors will increase its efficiency, and thus, reduce the cost, or, in other words, result in an increase in the returns.

Marshall observes, “in those industries which are not engaged in raising raw produce an increase of capital and labour generally gives a return increased more than in proportion; and further this improved organisation tends to diminish or even override any increased resistance which Nature may offer to raising increased amounts of raw produce.” The Law of Increasing Return, in the words of Marshall, states that, “an increase of capital and labour leads generally to an improved organisation, which increases the efficiency of the work of capital and labour.”

Increasing return thus, is possible, because, with an increase of the scale of production, the cost is reduced, and it is possible for the industry to enjoy the benefits of certain external economies, as we have seen.

**The Law of Constant Return :** The law of constant return operates in an industry, when, an increase in the application of one factor by a certain percentage raises the total output of the industry by the same percentage, that is, 5 per cent increase in the application of a factor raises the total yield by exactly 5 per cent. The law of constant cost thus simply states that the yield increases exactly proportionately to the increase in the application of one or more factors of production.



The law, it may be said, holds good only if we assume the absence of indivisible units of the factors of production and also perfectly elastic supply of them ; but neither of these is practical assumption. It is, however, possible, as has been observed by Marshall, that "in any industry, the actions of the law of decreasing return and increasing return may just neutralise one another, which means production under the conditions of constant return. "If the actions," observes Marshall, "of the Laws of Increasing and Diminishing Return are balanced, we have the Law of Constant Return and an increased produce is obtained by labour and sacrifice increased just in proportion." <sup>1</sup>

It is thus clear that, if there were no economies of large scale production, there would not be anything like the law of increasing return. And also, both the laws *i.e.*, the Law of Increasing Return and the Law of Diminishing Return operate simultaneously in each industry. For, each industry "has its bottlenecks—points at which the scarcity of some factor or factors presses heavily—and each industry has its economies of scale. In some industries economies of scale predominate and in others they are comparatively insignificant. In the first group costs will be falling, and in the second they will be rising, as output increases. But the laws of decreasing and increasing returns operate simultaneously in each ; it is only *on balance* that we can draw a line of division between them." <sup>2</sup>

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<sup>1</sup> Marshall—*Economics of Industry*, p. 180.

<sup>2</sup> A. Cairncross—*Introduction to Economics*, p. 195.

## CHAPTER 13

### SUPPLY, DEMAND AND PRICE

**What is meant by Supply in Economics ?** The word supply is used in more senses than one. We use it, for instance, to mean the usual or normal output of anything per unit of time, or again, it may be used to mean the total stock of anything, at any given time. The term may be used in yet another sense, *viz.*, the amount of anything offered for sale, at a price, at any given time. It is in this sense that we use the term in economics.

**Law of Supply :** Supply, in economics, thus means supply at a price. There is, thus, a relationship between the price and the amount of a thing which the sellers would offer for sale. More, for instance, will be offered for sale when the price is high, and less will be offered for sale, when the price is low.

The Law of Supply, therefore, states that the supply increases when the price rises and decreases when the price falls. The supply curve, therefore, as a rule slopes upward to the right as is shown in the following figure.

In figure 17, the amount offered for sale is measured along the horizontal axis  $OX$ , and along the vertical axis,  $OY$  is measured the price.

It is noticed from the supply curve,  $SS^1$  that when the price rises from  $PP^1$  to  $QQ^1$ , the amount supplied increases from  $OP$  to  $OQ$  and, when the price rises

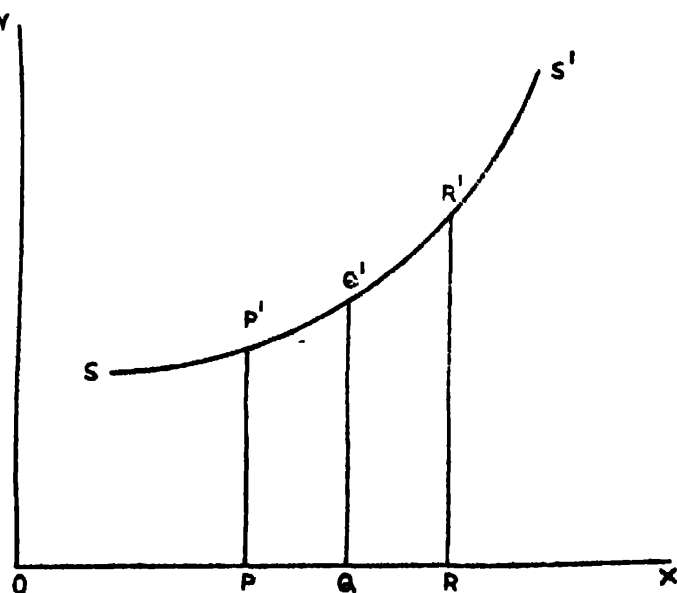


Fig. 17

still, that is, becomes  $RR^1$ , the amount supplied increases still

more, *viz.*, it becomes OR. (The supply curve thus slopes upward to the right).

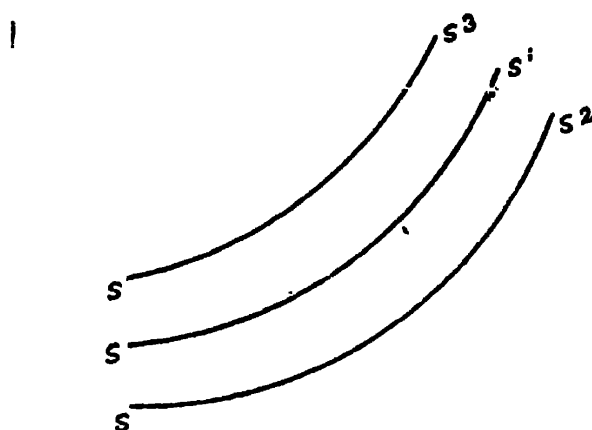


Fig. 18

The supply curve  $SS^1$  will shift to new positions of  $SS^2$  and  $SS^3$  according as there is an increase or a decrease in the total supply of any commodity.

### Supply Schedule :

Just as we can draw a demand schedule to indicate the different amounts of a commodity

which the buyers would buy at different prices, so also we can draw a schedule showing the different amounts of a commodity which the sellers would offer for sale at different prices. This is the supply schedule.

**Equilibrium of Demand and Supply :** The Law of Demand states that when the price of anything falls, the demand for it rises, and, when the price of it rises, the demand falls. This can be illustrated by drawing a demand schedule.

The Law of Supply states, that when the price of anything rises, the supply increases, and when the price falls the supply shrinks. This also can be illustrated by drawing a supply schedule.

In the following table we have combined both the demand schedule (on the left column) and the supply schedule (right column). In the centre are mentioned the prices of, say, fountain pens :—

it demanded	Price of a pen	Amount offered for sale.
1,500	5/-	500
1,200	8/-	700
1,000	10/-	1,000
900	12/-	1,200
700	15/-	1,500

It is seen from the above table that as the price of the fountain pen rises, the demand falls; and the supply increases. When, however, the price of the pen is Rs. 10/- each, the buyers are willing to buy 1,000 pens, and the sellers also are willing to sell the same amount, that is, 1,000. 1,000 is thus, the equilibrium amount and Rs. 10/-, the equilibrium price. That is, if the price is higher than Rs. 10/-, more will be offered for sale than the buyers are willing to buy and, if the price is lower than Rs. 10/-, less will be offered for sale than the buyers are willing to buy.

The position can be illustrated with the help of a graph in the following way.

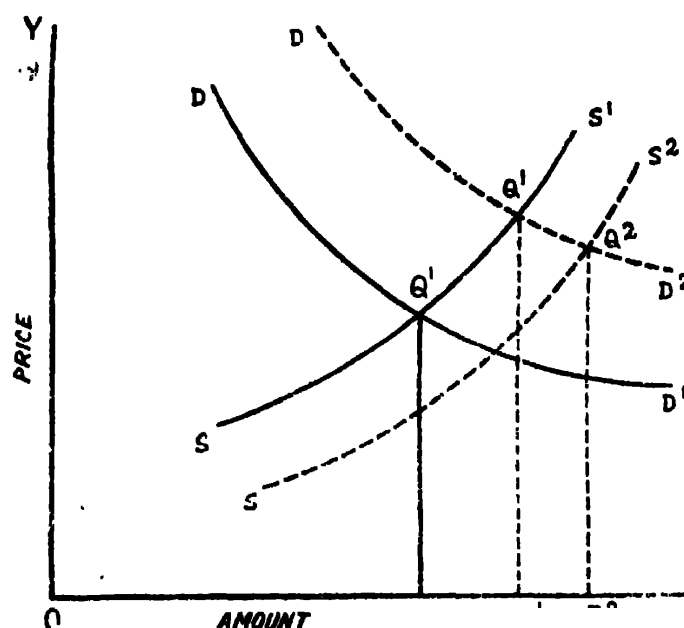


Fig. 19

In figure 19, the vertical axis  $OY$  measures the price and the horizontal axis  $OX$  measures the amount.  $DD^1$  the demand curve, represents the different amounts which will be purchased at different prices and  $SS^1$ , the supply curve, represents the different amounts which will be offered for sale at different prices. These curves, that is, the demand and the supply curve intersect at  $Q$ . The price  $QP$ , therefore, is the equilibrium price and the amount  $OP$  is the equilibrium

amount. That is, at this price (QP) the buyers are willing to buy the amount which the sellers are willing to sell.

If, however, the demand increases while the supply does not, and the new position of the demand curve is  $DD^2$ , then, the equilibrium price will be  $Q^1P^1$ . Similarly, if the supply also increases, and the new position of the supply curve is  $SS^2$ , then the equilibrium price will be  $Q^2P^2$ .

**Elasticity of Supply :** We have already discussed the concept of elasticity of demand. Now we shall discuss the concept of elasticity of supply.

The supply of a commodity is inelastic or elastic according as a change in its price, causes a less than proportionate or more than proportionate change in its supply. The elasticity of supply of a commodity thus measures the ease with which the producers can meet a rise or a fall in its price by increasing or decreasing its supplies. In other words, it is the rate at which the quantity offered for sale changes as the price changes. The elasticity of supply can be measured by dividing the percentage increase in the amount supplied by the percentage increase in the price.

**Conditions which Govern the Elasticity of Supply :** Elasticity of supply depends on various conditions. It depends, firstly, on the nature of the commodity. For instance, in case of articles which are extremely perishable and, therefore, must be disposed of quickly, the supply is inelastic over a short period. Secondly, it much depends on the cost of producing additional units. That is, if the cost of producing additional output of a commodity is very high, its supply will be inelastic. Thirdly, the elasticity of supply also depends on the range of alternatives open to any producer. When, for instance, a producer sells his commodity in more than one market, a fall in the price of the commodity in any market will prompt him to sell it in other markets, that is, the supply of his commodity is elastic in that market. Similarly, the supply is likely to be

elastic, if the alternative of closing down his works, and thus to cease producing altogether, is not very difficult for him *i.e.*, does not involve him in considerable loss. Lastly, the supply will be elastic, if the commodity is produced under conditions of increasing returns, if, however, the price is not falling.

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## CHAPTER 14

### THE NATURE OF COSTS

**Meaning of Cost of Production :** To understand the theory of value, it is necessary to understand what is meant by cost of production of a commodity in economics. No factor of production can be commandeered by an entrepreneur, unless, he is prepared to pay for its services. Not only has he to spend money on the purchase of raw materials, and on various other accounts, known as trade expenses, *e.g.*, advertisements, etc., but he has to incur expenditure on several other headings also. He has, for instance, to pay rent for the land on which he erects his factory ; interest on the capital he might have borrowed ; wages to the labourers he employs, etc. All these expenses, are known in economics, as the money costs of producing anything. Money costs also include, it should be noted, the allowances which are to be made for the wear and tear, that is, for the depreciation of machines, etc., and the normal earnings of management.<sup>1</sup>

**Real Cost and Opportunity Cost :** The concept of cost has been understood in different ways. The classical economists, for instance, understood by costs, the sacrifices and exertions which the labourers undergo while engaged in the work of production, or, the sacrifices in the shape of 'abstinence' or 'waiting', which the capitalists make while they save. Payments made to these factors, namely, labour and capital, for

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<sup>1</sup> **Factor Cost :** "In a given state of technique, resources and costs, the employment of a given volume of labour by an entrepreneur involves him in two kinds of expense : first of all, the amounts which he pays out to the factors of production (exclusive of other entrepreneurs) for their current services, which we shall call the *factor cost* of the employment in question ; and secondly, the amounts which he pays out to other entrepreneurs for what he has to purchase from them together with the sacrifice which he incurs by employing the equipment instead of leaving it idle, which we shall call the *user cost* of the employment in question."—(Keynes—General Theory, Ch. 3, p. 23).

obtaining their services, that is, the wages and the interests, or, in other words, the money costs, thus according to them represent the cost of these sacrifices in terms of money or measure the real costs.<sup>1</sup>

The concept of real cost, however, presents some difficulties. It is undeniable that, there is irksomeness in labour, which has to be paid for if the labourer has to be engaged; that, savings imply 'abstinence or waiting,' a sacrifice on the part of the capitalist which, again, has to be remunerated. But the classical economists have not provided any common measuring unit in terms of which the different types of real costs can be measured and expressed. Hence, any objective or precise measurement of real cost is well-nigh impossible, since, the concept relates to the sacrifice or exertions of the factors which are extremely heterogeneous.<sup>3</sup>

**Opportunity Cost :** Productive resources can be commandeered for various purposes. The factors of production, that is to say, can be used in order to produce different commodities. This, in other words, means that while a factor is engaged in producing one commodity, it cannot be used for the production of any other commodity. If, therefore, the cost of any factor, engaged in producing a particular commodity is not covered, that factor, obviously will move to some other industry, and the cost of this factor in its present use, is the value of what it could produce in that industry. Cost, therefore, measures the "pull" of competing alternatives and should always be considered in terms of alternatives.

The concept of opportunity cost thus simply states that, the cost of producing any commodity is fundamentally what

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<sup>1</sup> Since land is a free gift of nature and rent does not enter into price they did not consider it necessary to reduce land-cost into real terms.

<sup>2</sup> It is, however, possible that sometimes the owner of the firm supplies some factors used in the process of production. He, for instance, may own the land on which the factory is built, or, he may invest his own capital. In these cases, the total cost of production should, therefore, include the *imputed* value of these productive resources, or factors, which are used but not actually paid for.



we have to pay for detaining the productive resources, in order to make their services available to the industry producing the commodity, instead of allowing them to move to some other industry.

While there are several alternative uses to which the productive resources can be put, the supply of these resources, however, is limited. Factors, therefore, when detained for producing any commodity, must be paid at least that amount which they could earn in alternative occupations or uses. The cost of producing anything is, thus, the cost of 'displaced alternatives'. The wage a labourer should be paid, the interest to be paid on capital, the earnings of the entrepreneur, the rent to be paid for the particular piece of land, will, thus, according to the concept of opportunity cost, depend on what the labourer could get in alternative employment, the capital could earn in other alternative uses, the entrepreneur could earn elsewhere as a salaried manager, and the land could earn in any other alternative use. The cost of detaining the productive resources in any particular industry is thus equal to the value of the these resources for other purposes, plus the cost of transferring these resources from their present employment to the alternative employment which is most attractive. The cost thus measures what we could produce instead. Or, in other words, what we forego by using the productive resources for one purpose rather than for another.

The concept of opportunity cost, however, overlooks that factors may have special preference for any particular employment, and when there is such preference, the cost of transferring it to any other alternative employment necessarily will exceed its transfer price. Take, for instance, the case of a factor that can be used for producing only one product. As there are no alternative uses of such a 'specific' factor,—how can we determine its opportunity cost? Payments which have to be made for the use of such specific factors whose opportunity cost may be nil will, therefore, be of the nature of rents.

**Fixed or Overhead Costs :** By fixed or overhead costs are meant those costs which do not vary with the output, but which a firm has to incur, even if the production is nil for the time being. Such fixed costs which the firm has to incur, for instance, are the costs of maintaining the plants, machines, buildings, maintenance staff, etc.

**Variable Costs :** Some of the costs which are incurred by a firm while engaged in production, vary with the output, that is, more or less need be spent as the volume of the output is large or small. These costs are known as variable costs. Such variable costs which a firm has to incur are, for instance, its outlay on the purchase of raw materials, or payments it makes to the labourers etc.

Fixed and variable costs are also known as supplementary and prime costs respectively. Ultimately, or, in the long run, both the fixed costs and the variable costs must be covered by a firm, or else, it will go out of business. In the short run, if any output has to be produced, the prime costs must, however, be covered. These include all the variable costs, plus some of the fixed costs, as for example, the salaries of the office staff, etc.

**Average Cost :** The total cost of a firm of producing a certain output, is the sum of the total fixed and the total variable costs. We, therefore, can find out the average total cost by dividing the total cost by the output produced. Similarly, by dividing the total fixed cost by the output, we can obtain the average fixed cost ; and by dividing the total variable cost by the output, we can obtain the average variable cost.

To take an illustration. The total cost of producing 500 pens, let us suppose, is Rs. 3,000. Of this sum, the fixed cost of the firm producing these pens, say, is Rs. 1,000 and the rest, that is, Rs. 2,000 is the variable cost. The average total cost, the average fixed cost, and the average variable cost per pen, thus should be, Rs. 6 (i.e., Rs. 3,000/500) ; Rs. 2 (i.e., Rs. 1,000/500) ; and Rs. 4 (i.e., Rs. 2,000/500) respectively.

**Marginal Cost :** The total cost of producing anything changes while the number of units produced changes. The marginal cost of producing a thing is the increase in the total cost consequent on an increase of output by one unit. It simply measures the change in the total cost while one more unit is produced. If, for example, the total cost of producing, say, 10 suitcases is, Rs. 80 and, that of producing 11 suitcases is, Rs. 85, then, the marginal cost of the 11th suitcase, the additional unit, is Rs. 5, that is, the increase in the total cost consequent on an increase in production by one more suitcase, (*i.e.*, consequent on the production of the 11th suitcase, the additional unit).

Increased output will lead to a fall in the average cost, but it will be so, that is, the average cost will fall so long as the marginal cost is less than the average total cost, but will rise with the increasing output, when the marginal cost becomes more than it *i.e.*, the average total cost. In other words, the average total cost will rise or fall, according as the marginal cost is higher or lower than it. The average total cost is thus lowest, when the marginal cost and the average cost are equal.

**Selling Costs :** Selling costs are those expenditures which are incurred by a producer or a seller to induce buyers to buy one commodity, rather than another, or, to buy from one seller rather than from another. In other words, the expenditures incurred with the object of creating, or increasing the demand for the products of a firm, are, its selling costs. These expenditures modify the preferences of the buyers in favour of the products produced by the firm and thus ensure larger sales.

Expenditures on advertisement, on improvements in quality, or on special services, etc., are the selling costs which are incurred by a firm to increase its sales.

It is, however, hardly possible to know accurately what volume of sales will result from spending a definite sum on advertisements, etc., just as it is impossible to calculate, how far sales have been increased due to any particular expenditure.

on advertisement in the past. It is thus a peculiarity of the selling costs that there does not exist any proportion, so to say, between the advertising costs and the volume of sales. Besides, not infrequently, a firm's spending a particular sum on advertisement, etc., *i.e.*, its selling costs, are largely influenced by the behaviour of its competitors.

Now, how far a firm will push its sales costs? When competition is pure, there is no selling cost and, therefore, we omitted any discussion of the complications arising from the inclusion of the selling costs in the cost of production of a firm.<sup>1</sup> But, when the competition is imperfect, the total costs of production of a firm include both the production costs and the selling costs, that is, the expenditures on sales promotion. A firm, therefore, will push its sales costs upto the margin at which the last rupee spent on advertisement, etc., just repays itself by yielding a net increase of Re. 1 in revenue—a net increase, that is, after deducting the cost of production of the extra units of goods which are sold.

Just as the marginal cost of production tends to equal the revenue from the last unit produced, so the marginal sales cost will also tend to be equal to the revenue from the last unit of sales outlay.<sup>2</sup>

The existence of the selling costs thus necessitates modification of the marginal theory we have learnt. These costs ensure larger sales, that is, a firm now (because of these outlays) sells more than it would otherwise be able to sell, (that is, without incurring these costs), at whatever price it chooses to fix. This means that the demand curve will now shift upward and to the right. Similarly, the addition of the sales costs to production costs will also alter the shape of the supply curve.

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<sup>1</sup> No firm, however, would incur these costs if all buyers knew exactly what they wanted and, therefore, could not be persuaded to change their preferences for different commodities.

<sup>2</sup> But there is one peculiarity which we have observed *viz.* whereas it is possible to estimate the revenue obtained from the production of the last unit, it is impossible to calculate the revenue from the last unit of sales outlay.

The earlier theory of value under perfect competition ignored this element of selling costs. But competition these days is never perfect and these sales costs do influence the value of commodities. An adequate theory of value, therefore, has to reckon this element which considerably influences value.

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## CHAPTER 15

### PRICING, WHEN THERE IS PERFECT COMPETITION

**The Meaning of Perfect and Pure Competition :** Perfect competition in any commodity, that is, competition 'purged' of every element of monopoly is, of course, rare and, is said to exist when the following conditions are fulfilled, *viz.*, firstly, the market in that commodity should necessarily be perfect. This, in other words, implies that both the buyers and the sellers should have full knowledge of the prices in different parts of the market ; the former should have no preference as between different units of the commodity offered for sales ; and the latter should be indifferent as to whom they sell. There should be, in the second place, complete freedom of movement of the commodity, as well as, of the buyers and the sellers, between different parts of the market. Thirdly, the products should be considered by the buyers as not only physically interchangeable, but as perfect substitutes, in every way. In the fourth place, no firm would be in a position to charge any price higher than the market price ; for, in that case, none would buy from it ; nor, again, would any firm be able to charge a price lower than the market price, for, in that case, others also would resort to price cut. Hence, there would exist only one price throughout the market.

Secondly, perfect competition in any commodity exists, when neither the individual buyer, nor, the individual seller, is in a position to influence or to alter the market price. Nor, again, the buyers restrict their purchases, in order to lower the price, or, the sellers withhold the supply, in order to raise the price.

Competition, to be perfect, therefore, the number of firms producing the commodity should be large, so that, acting alone none should be in a position to influence the price by changing its output, that is, to raise or lower the price, by restricting or

increasing its output, for, such changes will have only negligible effect on the total output. Similarly, the number of the buyers should also be large, so that, acting alone, that is, by expanding or contracting one's purchase, none can influence the price.

Finally, the supply of the factors of production should be perfectly elastic. It is, however, not necessary that all the units of all the factors should be perfectly mobile. What is expected is, that a certain part of the supply of each factor should be fluid enough to achieve the assumed result. In other words, the prices of equal factors should be equal in different uses.

**Pure Competition :** The first requirement of a pure competition in any commodity is, of course, that it should be without any element of monopoly. Secondly, the number of buyers and of sellers, necessarily should be very large, so that, neither any buyer nor any seller, acting alone, can influence the market price. Thirdly, the product should be perfectly standardised and the buyers also should have no preference for any particular seller.

**Average and Marginal Revenue : Their Relationship :** Increase in the size of a firm, we have seen, results in considerable economies, both internal and external. Does this, then, mean that a firm should continue to produce larger and larger output, to maximise the profits? Obviously not. For, ultimately the law of diminishing return is sure to operate, and a stage will be reached after which further expansion would increase the total costs more than the total revenue or the receipts it obtains. The entrepreneur will find that any more increase in the output after this stage is reached, will affect the price, that is, will lower the price which he receives for all the units he produces.<sup>1</sup> The problem for the entrepreneur is, thus,

<sup>1</sup> His marginal revenue, therefore, must fall short of the price by an amount equal to the concession that has to be made to the existing buyers in order to extend sales.

how far to expand the firm? Or, in other words, where to cease expanding the output? The entrepreneur will continue to increase his output so long as the increase in his total costs is less than the increase in his total revenue (due to the increase in his output.) His object, that is to say, should be to equate the *marginal cost* and the *marginal revenue*. We have known what is marginal cost. It is now necessary to discuss the concepts of marginal revenue and average revenue.

**Marginal Revenue :** When additional units of a commodity are produced and offered for sale, each such successive unit, obviously results in some addition to the total revenue, that is, the total amount of sale proceeds of the commodity. The net amount which is added to the total revenue by each successive unit that is added to the total number offered for sale, is the marginal revenue. Marginal revenue thus simply means the net addition to the total revenue resulting from the sale of an additional unit of the commodity.

**Average Revenue :** When we divide the total revenue by the number of units sold in the market we get the average revenue.

To take a numerical illustration. Suppose, for example, that at Rs. 5 Mr. A can sell 15 umbrellas. But the price has to be reduced to say Rs. 4-15-0, if he wants to sell one more, that is, if he wants to sell 16 umbrellas. The amount received for the 16th umbrella is Rs. 4-15-0. In order to sell this unit, then, he has to accept Rs. 4-15-0, instead of Rs. 5, for each of the other 15 umbrellas, which means a loss of As. -/15/-. Marginal revenue of the 16th unit will be Rs. 4-15-0 minus As. -/15/- or Rs. 4. This sum of Rs. 4 thus will be the net amount added to the total revenue when 16 umbrellas will be sold by Mr. A instead of 15.

Stated in the following way the idea may be more clear.

16 umbrellas @ Rs. 4-15-0 (the price) : total revenue =  
Rs. 79.

15 umbrellas @ Rs. 5 (the price) : total revenue =  
Rs. 75.



Marginal revenue of the 16th unit, therefore, is Rs. 4.

In other words, Rs. 4 is the difference made to the total revenue by the sale of 16 units instead of 15 units, and is, therefore, the marginal revenue of the 16th unit.

From our discussion of the concepts of marginal revenue and average revenue the following points emerge :

1. Since the marginal revenue is the amount of net change in the total revenue resulting from the sale of an extra unit, and the average revenue is the total revenue divided by the number of units sold, it follows that, when the average revenue will be declining the marginal revenue will always be smaller than it, *i.e.*, the average revenue.

2. Marginal revenue and average revenue will be the same as long as average revenue remains constant, *i.e.*, does not change, with an increasing output. That is to say, when the elasticity of demand for the commodity is infinite, and the additional units can be sold at the same price, then the marginal revenue will be equal to the price or the average revenue. When, for instance, Mr. A can sell 16 or 17 umbrellas at Rs. 5 each, his total revenue will be, Rs. 80 and 85 respectively, *i.e.*, the difference to the total revenue in each case will be Rs. 5, the price. In other words, when the demand is perfectly elastic, the marginal revenue will be equal to the price.

3. The *mr* will be positive or negative, according as the elasticity of demand for a product is greater or less than unity, *i.e.*, according as a fall in its price results in an increase or a decrease in the total revenue.

4. When, however, the elasticity of demand is equal to unity, whatever the change in the price, the total revenue will remain the same and the *mr* will be zero.

**Importance of the element of time in the Theory of Value :** Time is an important factor in the determination of value, and the first economist, who focussed attention on the importance of time, in the problem of pricing or determination of value, was Alfred Marshall.

In actual life, we know, the demand and the supply schedules never remain unchanged for a long time ; they constantly change, and "every change in them gives new positions to the centres about which the amount and the price tend to oscillate." And, for whatever reason, if the demand changes, and consequently the scale of production moves from its equilibrium position, or, the 'position of rest', immediately forces will be brought into play tending to bring it, *i.e.*, the scale of production, back to that position, in exactly the same way as, "if a stone hanging by a string is displaced from its equilibrium position, the force of gravity will at once tend to bring it back to its equilibrium position." But in order that a rise in the price of a thing may exert influence on its consumption, time is necessary. In the same way, time is necessary, so that consumers may become familiar with the substitutes, if any substitute can be used, just as the producers also need time to be able to produce these things in sufficient quantities. Time, thus, is a factor which exerts its influence both on the consumers and the producers, that is, on demand and supply of any commodity. And, Marshall very suggestively chose to distinguish four periods of time, in the study of the theory of value. These are the following :

1. *Very short period i.e.*, when the supply remains fixed. The supply of anything, that is to say, refers to the stock on hand or 'in sight'. When the period is so short, the value prevailing in the market is known as the market value.

2. *Short period i.e.*, when the period taken into consideration is a few months or, a year, and the supply in such a period refers to the amount which can be produced with the already existing stock of plant '*personal and impersonal*', in the given time.

3. *Long period, i.e.*, when the period taken into consideration is not of a few months, but of several years, and the supply refers to the amount which can be produced with the plants and machines which themselves can be remuneratively

produced, and applied within the given time. The supply in the long period, thus, refers to the output which can be produced even by building new plants, by training labourers etc.

4. Marshall also has spoken of a *secular period*, that is, a very long period and the supply in such a period refers to the output that will be produced by adoption of improvements and inventions, by the growth of knowledge, population and of capital, etc. It thus refers to a very long period, say, a generation, or, even more. But in our discussion of the theory of value, we are more concerned with the first three periods *i.e.*, the very short, the short and the long period.

The question now before us is, therefore, how is value determined in each of these periods? Or the determination of the market price; the Short-run normal price and the Long-run normal price.

**Market Price :** The market price of a commodity is the price which prevails in the market in the very short period, when its stock or supply, is fixed. It is thus determined by the relation of demand to the stock actually existing in the market. It balances temporary demand and supply and thus may be regarded as temporary equilibrium price.

Take, for example, any perishable article, like fish or milk. In either case, since the supply is assumed to be fixed, the price will depend on the demand. That is, since the supply cannot be expanded or contracted at the will of the sellers, the price of such perishable commodities, the total supply of which should necessarily be disposed of daily, will be higher or lower, according as their demand is more or less.

The higgling of the buyers and the sellers will ultimately bring about a price—the market price, at which the total stock will be disposed of. It, that is, the market price, thus brings about a temporary equilibrium between the demand and the given supply of any commodity, during a very short period.

When, however, the article is not so extremely perishable as milk or fish, and, therefore, the sellers are not bound to dispose of the total stock to avoid loss, the conditions would differ.

Firstly, the sellers may have their 'reservation price', that is, they may consider a certain price as reasonable, and if the market price falls below this reasonable price, they may not dispose of the total stock. Instead, they will withhold a part of it, which will necessarily result in a rise in the price, at least to that level which the sellers consider as reasonable! Similarly, if increased demand pushes up the price, by depletion of the stock, the sellers can bring it down.

In short, when the commodity is not extremely perishable, the sellers are likely to withhold or deplete the supply of the commodity they sell, when they expect a future rise or a fall in its market price.

"Market values", therefore, says Marshall, "are governed by the relation of demand to stocks actually in the market; with more or less reference to 'future' supplies, and not without some influence of trade combinations."<sup>1</sup>

**Short-run Normal Price :** Here we assume, firstly, that the number of firms in the industry is fixed and, secondly, they produce with their already existing plants, machineries etc., that is, these are also assumed to be fixed.

When, under these circumstances, an individual firm will expand its output, or, contract it?

The market price, under competitive conditions, we know, is fixed for the firm. One thing is thus clear, namely, the firm's marginal cost must not be higher than the price obtaining in the market. In other words, it will produce more so long as the price at which it can sell the output is above the marginal cost, or the total revenue consequent on the sale of the additional units is more than the costs it incurs in producing these units. The marginal cost of a firm, however, rises while it continues to produce more and more. So, a point will come, sooner or later, when, the marginal revenue it obtains is just equal to the marginal cost. Further expansion obviously will be injudicious, for, that would mean loss.

<sup>1</sup> Marshall—Economics of Industry, p. 215.

The points which emerge, therefore, are briefly the following :—

1. No individual firm, when there is perfect competition, acting alone, can influence the price.

2. The demand curve for any firm is, therefore, perfectly elastic, that is, a horizontal line.

3. The number of firms in the industry and their equipments are assumed to be fixed.

4. Any firm should stop further expansion when its marginal cost is equal to the price.

5. The supply curve of the firm will be its marginal cost curve.

For the industry as a whole, the aggregate demand curve, however, is not likely to be horizontal. The short-period supply curve of the industry as a whole will be the sum of the marginal cost curves of all the firms in the industry. And, since more output is produced at higher cost per unit (resulting from the increase in the prices of variable services etc.), the cost curve for the industry will slope upward to the right. The short-run supply curve of an individual firm, whose endeavour will be to equate the marginal cost to the price, will be its marginal cost curve.

Any individual firm which fixes its reservation price above the market price will, therefore, sell nothing at all ; similarly, since its product is identical with that of the marginal sellers—it is not necessary for it to accept a price lower than what is accepted by the other firms or sellers.

The short period normal price, however, should cover the prime costs, that is, the variable costs, although, it may not cover the fixed costs. So, if the prices of variable services increase, the marginal cost may also increase, and it may be necessary to redraw the marginal cost curve of the industry as a whole at a higher level.

If the price does not cover the average variable cost—then production cannot continue, and the 'shut down' price as it is said to be, will necessarily compel cessation of production.

**Normal Price in the Long-run :** The period of time we take into consideration in this case is sufficiently long, permitting the firms in the industry to expand their output by changing the size of the plants, by investment of more capital, and by acquiring improved knowledge, etc. The number of firms engaged in the production may also change, that is, increase or decrease according as the demand for the product is more (necessitating more output) or less, (necessitating contraction of the output).

How, then, the long period normal price will be determined ?

In the short period, expansion of output by increasing the size of the plant, or, by more capital investment is not possible. The short period normal price, given the demand, thus is determined by the firm's marginal cost curve. In the long period, however, it is possible to expand the size of plants, to invest further capital, etc. So, any firm will make profit by producing more and more, so long as its average cost curve is below its marginal cost curve. Abnormal profits resulting from the difference between the average cost and the marginal cost will also result in new entries, and consequent increased supply. Demand remaining as before, increased supply will obviously result in a fall in the price. Sooner or later, the price will just be equal to the average cost. Conversely, if the price is assumed to be lower than the average total cost—existing firms in the industry will produce less and there will be no new entries. Supply will fall and the decreased supply, demand remaining the same, will force the price up. It will rise until it becomes equal to the average cost. In the long run, therefore, the equilibrium position for a firm is reached when the price, long-run marginal cost and the long-run average cost are all equal.

In the long-run, again, we have seen, the inefficient firms—unable to produce at the long-period minimum average cost (which necessarily should be the same for all) will cease producing, while the firms engaged in production are unable to make abnormal profit in the long-run.

### Pricing in the long-run under varying costs.

**Pricing in the long-run under constant costs :** Production is said to be under conditions of constant returns or constant costs, when the supply price per unit of the commodity remains constant, irrespective of expansion or contraction of the output. This, in other words, means that the expansion of output does not lead to a rise in the marginal cost, *i.e.*, the firm's average minimum costs remain the same in the long-run, irrespective of its volume of output. This may be so, when it is assumed, firstly, that there are no scarce factors of production, that is, the factors are in perfectly elastic supply to the industry. In order to commandeer larger units of the factors for expanding the output, it is not necessary to pay for their services at a higher rate. A change in the volume of output, thus, does not affect the prices of these factors.

Secondly, we assume that the fixed factors are also divisible, that is, there is no 'lumpiness' of the factors.

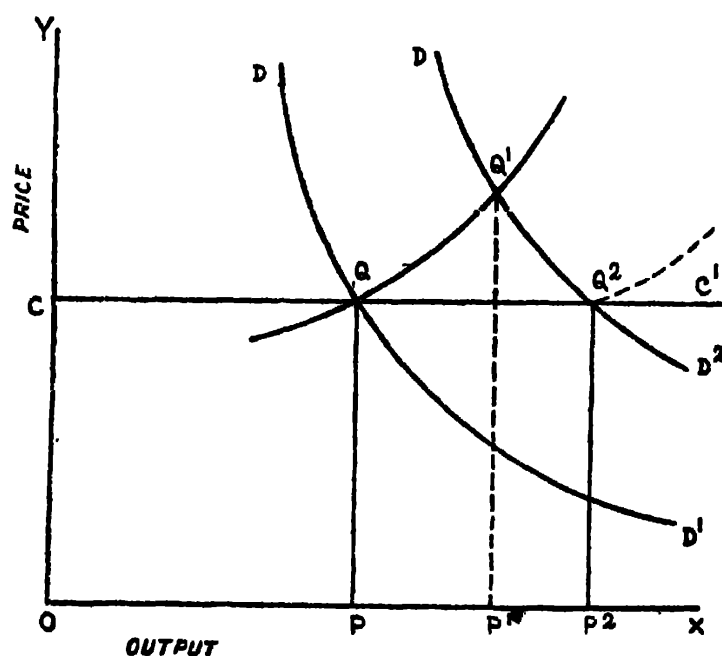


Fig. 20

In figure 20, the demand curve  $DD^1$  intersects  $CC^1$  representing the long-run average cost curve (identical with long-

run supply price) the point Q. Production under constant cost will mean, that whatever the position of the demand curve, the price will tend to be equal to QP.

It is, however, not necessary to assume that the market price at any given moment will be equal to QP, the long-run equilibrium price. Suppose that increased demand indicated by  $DD^2$ , a new curve at a higher level, pushed up the price from QP to  $Q^1P^1$ . To meet this larger demand, existing firms will expand their output, until higher marginal cost of the increased output is equal to the higher price. Temporarily the market price may be, therefore,  $Q^1P^1$ . But competing firms will enter the industry and the supply will now increase relatively to the demand. Fall in demand will result in a fall in the price. Some firms would be forced out of business, and the price will again settle at  $Q^2P^2$  and the new equilibrium output will be  $OP^2$ .

Similarly, if the market price is below QP, then unable to earn normal profits, since the cost per unit is higher than the price, the producers will contract their scale of production or output. Demand remaining the same the price will, therefore, rise till it again becomes equal to QP.\*

**Pricing under conditions of Increasing Costs :** Production under conditions of increasing costs means that an increase in the scale of output will lead to an increase in the cost per unit of the commodity. The supply price per unit, therefore, also will rise.

Production on a large scale has, we know, certain economies, both external and internal, that is, economies of scale. But continuous expansion will not ensure larger and larger economies of scale. This is so, simply because continuous ex-

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\*We have, however, no reason to suppose that the factors are perfectly elastic in supply. The dotted portion at the end of the curve  $CC^1$ , showing a rise indicates, that, the industry has surpassed the point of constant cost, and as larger number of firms enter into it—although they produce under '*identical cost conditions*', gradually they would have to pay higher prices for commandeering the services of the factors employed in other industries.



pansion implies commandeering more and more factors of production. And, unless it is assumed, that they are perfectly elastic in supply, (there is no reason to assume this for it would be unreal) after a certain stage—higher prices have to be paid for obtaining the services of the factors whose supply is less elastic or inelastic. Rise in factor prices is inevitable, if they have to be attracted from other industries in which they might have been employed. Thus,\* after a stage, economies of scale disappear and the marginal and the average cost tend to rise. In the long-run, therefore, the law of increasing cost will prevail.<sup>1</sup>

In these circumstances, that is, when the prices of the factors rise with the increase in the scale of production, the price of the commodity will be equal to the marginal cost of the lower-cost firms, and also to the minimum average total unit cost of the highest cost firm, which, it is necessary to attract into the industry, in order to satisfy the demand for the commodity.

In figure 21, the curves numbered 1, 2, 3, 4, 5 represent short-run cost conditions of each possible size of plant indicat-

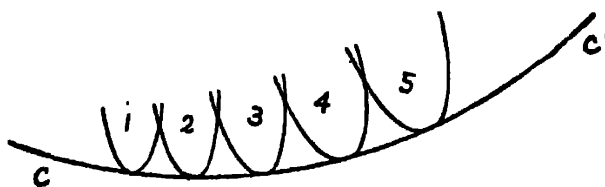


Fig. 21

ing the change in the scale of output. And from  $CC'$ , the

<sup>1</sup> Even if we assume that the other factors are obtainable at constant cost, the entrepreneur being an indivisible factor, after a point, this factor alone will lead to increasing cost, since, when increasing the scale, a firm will not be able to secure more and more efficient entrepreneur.

long-run average cost curve which touches the short-run cost curves at their lowest points, we notice that, with the increase in the scale of output at the beginning, the long-run minimum average costs fall but later rise. When production is under conditions of increasing costs, the price will be fixed at the point, where, the two curves, viz., the long-run average cost curve, and the long-run demand curve, intersect.

**Pricing under conditions of Decreasing Costs :** Production under conditions of decreasing costs means that with the increase in the scale of production, the cost per unit falls, resulting in a fall in the supply price of the commodity also.

There is a point, we have known, upto which expansion of any firm will secure economies of scale. These may be internal economies resulting, say, from better division of labour, or, specialisation, from fuller utilisation of indivisible factors, or from the purchase of raw materials on a large scale etc. Similarly, some external economies also accrue to a firm while the industry itself grows. That is, the growth of the industry leads to increased demand for machines, component parts, etc., which, therefore, can be produced on a larger scale, that is, with lower costs. The economies resulting from payment of lower prices for these machines, etc., are the external economies of a firm.

The cost, therefore, decreases so long as these economies are possible by expansion. But continuous expansion will not lead to continuous fall in the cost. This is so, firstly, because all the factors are not perfectly elastic in supply. Secondly, even if we assume that they are, the cost will tend to rise simply because after a certain point, diseconomies of the large scale management will outweigh the economies of further expansion. Inefficient management of an unwieldy firm will result in great diseconomies and will obviously raise the cost.

There is thus a point—the optimum point—upto which a firm should expand, if there is perfect competition. Further expansion will result in higher cost. Under perfect competi-

tion, the firms of optimum size, producing at lowest average cost, will exist.

If, however, there are a large number of firms in the industry and they expand their output to avail the economies of scale—the price of the product will obviously fall. And if the demand is inadequate, that is, not large enough to retain all the firms, or, in other words, if the output of all firms can not be sold, then some of these firms will be forced to close down. There is thus, the likelihood of one or a few most efficient firms remaining in the field, and leading, therefore, to monopoly or oligopoly.

**The Concept of the Representative Firm :** In an industry producing under the conditions of increasing returns, it is reasonable to suppose, that there may exist various firms at different stages of progress. Some may, for instance, be very efficient, and thus earn huge profits. Others, just some how manage to exist. There may be still others who, in fact, are losing but lingering in the hope of future expectations. How, then, we should determine the long-run normal value of the commodity produced under the law of increasing returns? Or, in other words, of the different firms producing the commodity, whose marginal cost will govern the value in the long run?

Obviously, we cannot consider the cost of either the most efficient firm, or, of the least efficient firm. For, in the first case, the other firms engaged in the industry and unable to earn normal profits (which should be included in the long-run normal value) will be forced out of the business, and in the second case, the industry will be crowded by the inefficient firms, and none would be forced out of business. This is, however, unlikely because, when the competition is perfect, inefficient firms will close down, sooner or later, and ultimately, only the 'Optimum' or the Representative Firms will survive.

The value in the long run, therefore, says Marshall, will be governed by the costs of neither of the most efficient, nor of

the least efficient firm, but by those of the Representative Firm. "When we speak of the normal cost of production of any class of goods," says Marshall, "we must suppose them to be produced by a firm that is fairly representative of the whole body of producers of those goods. Our Representative Firm must be one which has had a fairly long life, and fair success, which is managed with normal ability, and which has normal access to the economies, External and Internal, which belong to that aggregate volume of production."<sup>1</sup> The size and the output of such a firm, therefore, will expand or contract, if the price is higher or lower than this. The position will be equilibrium when the value settles at this figure, that is, is equal to the marginal cost of the Representative firm. Once the value is settled at this figure, there will be no tendency either towards an increase or towards a decrease of the output of the industry as a whole.

This, then, is the concept of the Representative Firm of Marshall, and the normal supply curve of the industry producing under the conditions of Increasing Returns will, therefore, be the supply curve of this firm.

The Representative Firm, then, is the long period average firm, having normal access, as Marshall says, to the External and the Internal economies which belong to the aggregate volume of production, that is, a firm under conditions, when the given economic forces have reached the position of equilibrium. It does not represent any special feature of the business, but represents the business as a whole.

**Criticism :** The concept of the Representative Firm has been criticised on the ground that, in the directory of business firms, we will search in vain to find out such a firm. But Pigou observes that, in the long run when the industry is in equilibrium, a firm which he calls the *Equilibrium Firm* may exist which produces a regular output in response to the long-run supply price.

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<sup>1</sup> Marshall—Economics of Industry, p. 180.

Can a firm, it is asked, produce at a loss in the long-run, when the industry is in equilibrium? Such a producer, obviously, it is said, will shift to other industries where it can earn normal profits. Equilibrium position cannot exist unless the normal earnings are ensured for all the factors. The concept, therefore, it is said is superfluous and, hence says Robbins, it is no more necessary for us to "assume a representative firm, or a representative producer, than there is for us to assume a representative piece of land, a representative machine, or a representative worker."<sup>1</sup>

But we should note that, while the supply of land is inelastic, the supply of business enterprise is not so. Secondly, in the long period, in the opinion of Marshall, there may exist firms producing at a loss. But, says he, the equilibrium in the industry does not necessarily imply, that the output of a particular firm should also be in equilibrium. There are limits to the growth of the individual firm. Like the life of an individual, a firm passes through different stages. From the stage of infancy, it reaches maturity, to be followed by decay. Taking all the firms in the industry into consideration, we may imagine, that, while some are expanding, there are others which are decaying. The equilibrium, therefore, may exist when these tendencies in opposite direction offset each other. The concept of Representative Firm is helpful for a study of the supply price of an industry in the long-run. By his illustration of trees Marshall has tried to explain the position. The oak might be the mightiest tree in the forest, but neither it has an endless growth, nor does it compose the forest.

The concept of the Representative Firm, says Robbins, is vague and superfluous, since Marshall is not explicit or clear, as to whether it refers to a particular size of plant, a technical production unit, or whether it refers to a representative business organisation. Robertson, however, would suggest that the firm Marshall speaks of as a representative firm, does

<sup>1</sup> *Economic Journal*, Sept., 1928.

neither refer to a particular size of plant, nor to a particular technical production unit. All that is necessary for a firm to be considered as the Representative Firm, according to him, is that the supply curve of such a firm should be a "small scale replica of the supply curve of the industry as a whole."

Finally, it is pointed out, how can competition exist in the long run while production obeys the law of Increasing Returns? It is reasonable to suppose that, when production is subject to the law of increasing returns, that is, the costs fall with the increase in the scale of output—eventually monopoly will be established. In other words, in such a situation, the most efficient firm will, by continuous expansion, and thus by securing the full economies of scale, succeed in establishing a monopoly, or, in any case, value will not be determined, as it is expected to be determined, when the competition is perfect. For, the competition will be imperfect, if a few firms exist, each producing a considerable portion of the total output. The assumption of perfect competition of many firms, producing under the law of increasing returns, as is made in the analysis of the concept of the Representative Firm, is therefore, unreal. The concept of the Representative Firm, thus is also, unreal and useless.

**Brief Statements of Some Early Theories of Value :** The earliest theory of value is the Labour Theory, and the Marxian Theory, or the Cost of Production Theory, are only variants of the Labour Theory of Value. These theories attempted to explain what governs value in the long-run. Day to day fluctuations in the prices of a commodity, that is, the fluctuations in the 'temporary or market value' were "dismissed with a vague reference to supply and demand."

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**The Labour Theory of Value :** Money, it was held, cannot be the ultimate standard of value, since its value undergoes changes every now and then. But the amount of labour which is necessary for producing any commodity provides an invariable and ultimate standard by which it is possible to

determine the exchange values of commodities. Unlike money, labour is a reliable measuring rod, and the value of a commodity, according to this theory depends on the amount of labour—the ‘toil and trouble’, embodied in it. Commodities, therefore, are dear or cheap, according as the amount of ‘toil and trouble,’ bestowed on their production, is more or less.

The advocates of the Labour theory of Value, Adam Smith and Ricardo, held that it is the labour, and not the utility, that is the cause of value of a commodity. Writing in his “The Wealth of Nations” observes Adam Smith, “Labour, therefore, is the real measure of the exchange value of all commodities.” Similarly, according to Ricardo also, labour is, “really the foundation of the exchangeable value of all things.”

**Criticism :** The Labour theory of Value is incomplete and inadequate, since it ignores the influence of demand on the value of a commodity. A commodity commands value, not simply because it embodies some amount of labour, but also because it has utility. Utility *i.e.*, the capacity to satisfy human wants, is no less an important factor influencing value than the labour necessary to produce it. But it is difficult to determine the connection between utility and value. For, a thing, *e.g.*, water may have great utility but no exchange value, while, on the other hand, there may be things of ‘doubtful utility’ *e.g.*, precious stones, but they may have great exchange value. “It was this puzzling “paradox of value,” that led Adam Smith and other economists to give up the attempt to relate utility to value and to fall back instead, on labour.”<sup>1</sup>

Secondly, labour is an extremely heterogeneous factor and, therefore, it is vain to search for a ‘common measure’ in order to determine the value of different commodities, by determining the amount of labour embodied in them.

Thirdly, the value of a commodity, according to this theory, is fixed by the amount of labour bestowed on its pro-

<sup>1</sup> Cairncross—Introduction to Economics, p. 148.

duction, and therefore, it, naturally follows, that, the value cannot change. But values do change, and it, therefore, cannot be said that, labour is the only cause of value. Moreover, what about the labour which is misdirected, that is, the labour bestowed on production of a thing which cannot be sold? Obviously, its value is nil!

Finally, it is pointed out, that the theory "gives only a partial explanation of the influence on<sup>2</sup> value of supply." It is often true that the scarcest things are most valuable. But do the things that are scarce necessarily require most labour for their production? It is true, that the scarce things are valuable because human labour is needed to produce them. But it is also possible that, things may be scarce and valuable, but because of reasons other than the 'labour' necessary to produce them *e.g.* the raw materials which are scarce.

Value, therefore, is governed jointly by supply and demand, that is, cost and utility, and not by labour alone. Labour, however, is "one thing among several that helps to moderate scarcity and so to create value."<sup>1</sup>

**The Marxian Version of the Theory :** According to Marx, as values, "all commodities are only definite masses of congealed labour-time." The value of a commodity, according to him, "varies directly as the quantity and inversely as the productiveness of the labour incorporated in it."<sup>2</sup> It follows, therefore, that, "that which determines the magnitude of the value of any article is the amount of labour socially necessary or the labour time socially necessary for its production."<sup>3</sup> By 'socially necessary labour-time' is meant the time required under existing conditions by the average labourer to produce an article when conditions of production are also normal.

Briefly, then, since labour, according to Karl Marx, produces all values, commodities should have value in proportion to the labour required to produce them. And the entire value

<sup>1</sup> Cairncross—Introduction to Economics, p. 149.

<sup>2</sup> Marx—Capital—Part I, Ch. 1.

<sup>3</sup> Marx—Op. cit. Part I, Ch. 1.



of the commodity should, therefore, go to the labour producing it. Hence, if any part of it goes to the capitalist, or to the landlord, as interest or as rent, then it will only mean that to that extent the labourer is exploited by the capitalist or the landlord. These capitalists or landlords earn profit, interest, or rent (when the market value is in excess of the wage costs, and therefore, labour receives less than the value of its product) not because they render any service, but simply because they happen to own the means of production.

**Criticism :** The theory of Marx is inadequate, since it ignores utility as a factor which influences the value of a commodity. Free gifts of nature, for instance, since they do not require any human labour for their production, according to this theory, cannot have any value ! But, in reality, we know those free gifts of nature which are scarce in supply relatively to their demand, have value, since they have utility.

Secondly, value is determined jointly by utility and the cost of production—which includes besides labour cost, interest, profit, depreciation allowances etc. It is, therefore, not correct to say that, labour cost alone governs the value of a commodity. The activities of saving and risk taking, it is pointed out, “can be just as productive as labouring ; they are almost as essential to the creation of value.”<sup>1</sup> Moreover, labour, as we have seen, is an extremely heterogeneous factor which cannot be reduced to a common measure by which the relative values of different commodities can be determined.

The fact is, that Marx propounded his Labour Theory of Value with a definite purpose, *viz.*, to attack the existing distribution of wealth, and to give a scientific basis to socialism. His theory seeks support by “an appeal to justice and the rights of man.” His theory is, therefore, not so much a theory of Value as a theory of Distribution.

**The Cost of Production Theory :** It is a more modern version of the Labour Theory of Value. In the long-run, the

<sup>1</sup> Cairncross—Introduction to Economics, p. 140.

exchange value of a commodity, according to this theory, is governed by its cost of production. In the cost, however, are included, besides labour cost, other costs, *e.g.*, the cost of raw materials, interest, depreciation on capital, and also the normal profit of the producer.

A commodity's value, therefore, according to this theory, will be in proportion to the cost of producing it, that is, it will be higher or lower, according as the cost of producing it, is higher or lower. And if the market value of a commodity is higher than the cost of production then it will be brought down by competition of rival producers to the level of the cost of production. Similarly, if it is lower than the cost of production, then less will be produced, since the producers will not find it profitable to produce it. So, the supply will fall and this scarcity will force up the price until it again becomes equal to the cost of production.

**Criticism :** Like the Labour theories of value, the cost of production theory also is incomplete and inadequate, since it ignores the influence of utility on value. Cost of production of a commodity will not give it any value-in-exchange if it does not possess utility at the same time. Besides, the cost of production exerts greater influence on value when a longer period is taken into consideration, but in the shorter period, demand, that is, the utility, exercises a greater influence on value. The theory, therefore, does not explain the short period value where utility is of greater importance than the cost of production.

Secondly, the value of a commodity has its influence on the cost of production, just as the cost of production has its influence on the value. A rise, for instance, in the value of a commodity, due to an increase in its demand, will naturally result in an increase in the supply of it. For, the higher price will induce the producers to produce more. But, more will be produced at a higher or lower cost of production than before, according as the production obeys the Law of Decreasing Re-

turn or the Law of Increasing Return. There thus exists a mutual relationship between the cost, value and demand.

The cost of production thus varies with the scale of output which, again, is determined by the demand for the commodity. Until, therefore, the demand is known, it is impossible to fix the scale of output and, hence, it is also impossible to know the cost of production. It is, therefore, meaningless to say that value is governed by the cost of production—which cannot be known until the demand is known. Besides, different firms may incur different costs *e.g.*, the cost may be low for the well-established and efficient firms, and high for the new and inefficient firms. Whose cost should we, therefore, take into consideration ? The theory is inadequate, since, it does not give any answer to this question.

Finally, value is governed by utility (demand) on the one hand, and scarcity in the supply, on the other. The cost of production limits the supply and, therefore, influences the value. But there may be causes, other than the cost of production, which may limit the supply of a commodity, *e.g.*, existence of monopoly, or, take again, the scarcity of rare paintings of great artists.

The theory also overlooks another important fact, *viz.*, that the value of commodities may rise or fall, regardless of any change in their cost of production.

It is, therefore, not correct to say that value is determined by only the cost of producing a thing. Rather, the demand (*i.e.* utility) and the supply (*i.e.*, cost) of a commodity jointly govern its value.

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## CHAPTER 16

### INTER-RELATED VALUES

So far we have studied how the price of a commodity is determined by the demand for and the supply of it. But it is also possible that the price of a particular commodity is largely governed or influenced by the demand for and the supply of other commodities. That is to say, the price of a commodity may be, and often in fact is, inter-related with the prices of other commodities and hence, a change in the demand for and the supply of one will have repercussions on the demand and supply of others, that is, on the prices of other commodities. We shall now examine these cases.

**Joint Supply :** Commodities are said to be in joint supply when the supply of one automatically involves the supply of the others. These commodities, that is to say, can only be produced in association with those other commodities. Familiar examples of joint supply are mutton and wool, rice and straw, gas and coke etc. Obviously, therefore, in such cases of joint supply, if we want to increase the supply of one, the supply of the other will also simultaneously be increased.

Since the commodities are produced simultaneously in a single process of production and with the same joint cost, the question before us is : how will the value of these commodities be determined ? This, however, raises yet another question, viz : are these commodities produced in variable proportions or, are they produced in proportions which are fixed, that is, not variable ?

In the first case, that is, if the proportions can be varied, as for instance, in the case of wool and mutton, the proportion can be varied by different cross-breeding, and hence, we are in a position to know the marginal cost of production, that is, the additional cost of producing additional units of either,

then obviously the marginal analysis will help us in solving the difficulty of determination of the price of each of the commodities supplied jointly. For, the price, we know, will tend to equal the marginal cost of production.

In the second case, that is, when the proportions are fixed and cannot be varied, we cannot know the marginal cost of each and, therefore, pricing of each product separately becomes difficult. There are, however, certain broad rules to help us. These are, firstly, the combined values of the joint products must cover the joint expenses of these products. That is, the total supply of each will be disposed of at such prices as will cover the total cost of producing them. The total cost, in other words, should be equal to the total revenue.

In the second place, since we have a joint supply schedule and separate demand schedules, the price of each of the products will, obviously, be determined by the demand for it in the market, or its marginal utility to the buyers, that is, according to the principle of what 'the traffic will bear.'

Thirdly, it is, however, likely that each of these products produced jointly necessitates some extra costs or, special costs, to make it marketable. Its price, therefore, must necessarily cover this extra cost too.

Finally, it is also possible that, when two commodities are jointly produced, the demand for one may increase, while that of the other, does not. Obviously, increased supply of one will simultaneously increase the supply of the other too. How then, it may be asked, the price of the product whose demand has not increased will be affected? In such a case, since its supply will increase with no corresponding increase in its demand, its price will obviously fall. In a similar way, if the demand for one of the joint products falls and, therefore, the supply of both shrinks, then the price of the other product will rise.

**Joint Demand :** Commodities are said to be in joint demand, when they are demanded in association with other com-

modities, either for satisfying a particular want, or for producing a particular article. Thus, pen and ink, tea and sugar, etc., are said to be in joint demand.

The value of each commodity, in this case, will depend on its marginal utility, which can be determined by changing its supply while keeping the supply of the other unaltered. Obviously, when commodities are demanded jointly, increase in the demand for one simultaneously increases the demand for the other too and the fall in the price of the one, due to increased supply will lead to a rise in the price of the other although both will be in greater demand but as the supply of the other, which is a complementary product, has not increased, its price will tend to rise. In the same way, if one of the two products, which are demanded jointly, becomes scarce in supply, the demand and also the price of the other will fall.

**Derived Demand :** The consumers' demand for the finished goods is direct demand. But the demand for the things which are used in producing the finished goods, is indirect and is derived from the demand for the finished goods towards the production of which they are used. In other words, the demand for the services of the factors of production necessary for the production of the finished product, is indirect or derived demand, that is, derived from the demand of the consumers of the finished product.

A fall in the supply of such a factor which is jointly demanded with others for producing a commodity, may cause a rise in its price, under certain conditions. These conditions, as Marshall observes, are the following :

Firstly, the factor should be an essential, that is, indispensable factor, having no good substitute.

Secondly, the demand for the commodity, in the production of which it is necessary, should be 'stiff and inelastic', which means, that a check to its supply will force the consumers to offer a higher price for it, rather than go without it.

Thirdly, the price of this factor should constitute only a small part of the total expenses of production of the commodity.

Fourthly, even a small check to the amount demanded should cause a considerable fall in the supply prices of other co-operating factors of production ; and this will increase the margin available for paying a higher price for this factor. In the construction of buildings, as Marshall has illustrated this point, if, for instance, the brick layers etc., cannot afford to remain idle and hence, are agreeable to accept a lower rate of wage than what they were getting before, then the plasterers may be paid at a higher rate from the margin which will now be available.

**Composite Supply :** When commodities are substitutes for one another, they are said to be in composite supply. That is, their demand can be satisfied from several sources. Tea, coffee, cocoa etc., for instance, form a composite supply for the satisfaction of one want, that is, the desire for a drink.

When commodities are in composite supply, the fall in the price of one of them will lead to a fall in the demand for the others, that is, its substitutes, and, therefore, their prices will tend to fall.

The cost of production and the marginal utility, therefore, will determine the price of the commodities which are in composite supply.

**Composite Demand :** When commodities are wanted for several different purposes, they are said to be in composite demand. We may demand electricity, for instance, for more than one purpose, *e.g.*, for lighting, cooking, heating, etc. The demand for electricity, therefore, is a composite demand for lighting, cooking, heating etc. Similarly, the demand for the raw materials which can be put to various different uses is also composite demand. It is, therefore, evident, that the consumers, or the buyers of such an article, will compete with one

another for obtaining it, and an increased demand for one particular use will imply reduced supply in the other alternative uses. Consequently, its price will tend to rise all round, that is, in all its uses. The price of such an article ultimately, therefore, will be such as will equate its marginal utility in every alternative use.

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## CHAPTER 17

### PRICING UNDER MONOPOLY

#### The Meaning of Monopoly, Duopoly and Oligopoly

**Monopoly :** A monopoly is said to exist when there is no close substitute for the product of a single firm, nor is the entry of new firms possible. This firm, therefore, virtually controls the total supply, and is in a position to formulate its own price policy since, there will be no competitor.

**Duopoly :** Duopoly exists when two firms are engaged in the production of either a standardized product, or two products which are very slightly differentiated. When, however, the products are not identical, that is, when there is some product differentiation, duopoly is said to be of impure type.

**Oligopoly :** Oligopoly exists when the number of firms engaged in producing a homogeneous product is so few that, each is aware of the effects of its supply upon the price of the product in the market. When, however, the firms do not produce identical products, the situation is said to be differentiated oligopoly.

Another *sub-type* of oligopoly is the Price-leadership. When the situation is either duopoly or oligopoly, we have seen, that the supply of individual firms affects the price of the product. By *price-leadership* is meant a situation in which one or more very large firms fix the price of the product and the other small firms in fixing the price of their product simply follow the 'leader'. Such *price-leadership*, however, may exist accompanied by either standardized product or differentiated product.

**Classification of Monopolies :** A monopoly is thus a situation in which a single firm controls the supply of a commodity it produces and there exists no rivalry of competing firms. Such a situation, however, may come into existence in different ways. For instance, one giant firm may absorb all

the other small firms in the industry, or, again, the rival firms may themselves reach an agreement and amalgamate. Such absorption or amalgamation leads to voluntary monopolies.

Secondly, monopolies are created by law when, for instance, copyrights are granted to authors, or to encourage invention, patents, trade marks, etc. are conferred by the state. These are said to be legal monopolies.

Thirdly, competition in certain public utility enterprises is considered as undesirable on both social and economic grounds, *e.g.*, in the case of public utility services, like the supply of gas or electricity. Competition, in such cases, therefore, is not allowed by the state and the monopolies which thus come to exist are known as Social monopolies.<sup>1</sup>

**Monopoly Price :** We have discussed how value is determined when the competition is perfect. The question before us now is, how is price determined when the situation is monopolistic, or, how is monopoly price determined ?

Obviously, the motive of the monopolist is the same as the motive of the producer in a competitive market, *viz.*, to earn maximum profit. But under perfect competition, the demand curve which faces a producer is perfectly elastic at the prevailing price of the product, and hence, he need not curtail his output for fear of the effect of his supply on the price he receives for his product. But the demand curve which faces a monopolist is less than perfectly elastic, and hence, he has to consider the effect of his own action upon the price of the product.

Of course, a monopolist may offer for sale in the market the amount which he himself wishes to sell, the price being allowed to be determined by the influence of the demand, or, he may fix a price leaving the amount to be determined by the demand for the product at that price. But, in any case, as

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<sup>1</sup> Some also speak of Natural monopoly which is said to exist when the sources of some raw materials are limited, and are confined to certain parts of the world, *e.g.* diamond in south Africa.

long as the demand curve which faces him is less than perfectly elastic—the fact remains that, larger sale of his product is possible at a lower price only.

A monopolist, thus, will succeed in selling a larger output only at a lower price. When, then, it may be asked, his profits are likely to be maximum? His profits will be maximum, when his marginal cost, *i.e.*, the addition to his total cost, when one unit more is produced, is equal to his marginal revenue, *i.e.*, the addition to his total revenue when, one more unit is produced and sold. This, in other words, means that so long as his marginal cost is less than the marginal revenue, it is profitable for him to expand, that is, to produce and sell more. But, we have seen, that the demand curve which faces the monopolist is less than perfectly elastic, and thus, he can sell larger output only at a lower price. Continuous expansion of output, therefore, will lead to an increase in his marginal cost and decrease in his marginal revenue. And, after a certain stage, if he continues to expand, his marginal cost will be greater than his marginal revenue. More production, therefore, will mean loss. The monopolist, therefore, will continue to expand his output so long as his marginal revenue is greater than his marginal cost, and stop when they are equal, in order to earn maximum profits. Much, of course, depends upon the elasticity of demand for the product and the conditions of production.

The demand curve facing a producer in a competitive market is perfectly elastic, that is, he can sell any amount at the prevailing price of the product in the market. He will, therefore, earn maximum profit when his marginal cost will be equal to the price. But for a monopolist, sale of an additional unit, will, of course, add the price of this unit to the total revenue, but since he expects to sell more only at a reduced price, that is, at a price lower than what it was before, the total revenue he gets by selling all previous units at a lower price, will decline. His marginal revenue, therefore, is lower than the price at which

the additional unit is sold and, may even be negative while the price is positive. To earn maximum revenue a monopolist, therefore, should stop at that point when his marginal revenue is equal to his marginal cost.

The following diagrams illustrate how the monopoly output is determined.

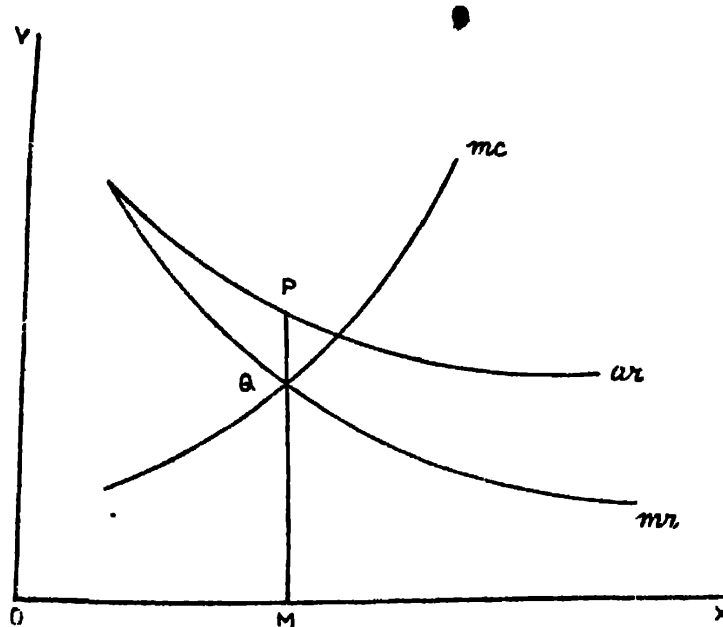


Fig. 22

In figure 22,  $mc$ ,  $ar$ ,  $mr$ , represent the marginal cost curve, the average revenue curve and the marginal revenue curve respectively. Now, the monopolist will, we know, operate at the point where the marginal cost is equal to the marginal revenue. Hence, he will produce  $OM$  output, because when he produces  $OM$  output, his  $mc$  and  $mr$  are equal *i.e.*, both equal to  $MQ$ . The monopoly price will be  $PM$ . As is shown, the average revenue curve ( $ar$ ) slopes downward and the marginal revenue curve ( $mr$ ) lies below it.

Now, what happens when, for instance, the demand for his product increases *i.e.*, when, for the same amount of the commodity, the buyers are willing to pay more? An increase in the demand for a monopoly product will mean, firstly, that the demand curve will move to a higher level and, secondly, the

marginal revenue curve ( $mr$ ) which also naturally moves upward, will intersect the marginal cost curve ( $mc$ ) at a higher point. Since the monopolist will operate at the point where  $mc$  is equal to  $mr$ , it follows that, the output will now be more, and, generally speaking, the price will be higher than what it was before. The following diagram illustrates the positions of the curves before the increase of demand and after it.<sup>1</sup>

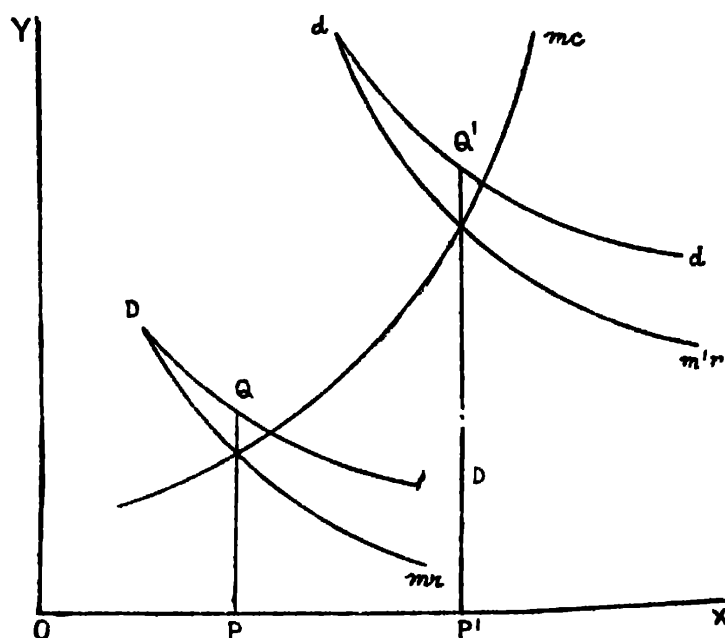


Fig. 23

*Before the increase of demand:*

$mc$ —the marginal cost curve,

$DD$ —the demand curve, and,

$mr$ —the marginal revenue curve

*After the increase of demand:*

$dd$ —the demand curve at a higher level :

$m'r'$ —the marginal revenue curve at a higher level.

It is thus shown that although the price rises from  $PQ$  to  $P'Q'$ , the output increases from  $OP$  to  $OP'$ .

Similarly, a fall in the demand may be illustrated by taking  $m'r'$  as the original position of the marginal revenue curve

<sup>1</sup> See Boulding : Economic Analysis.

and *mr* as the position afterwards, that is, after the fall in demand.

**Checks to the Powers of a Monopolist :** Is the monopolist, since he controls the total supply of his product, at liberty to fix a very high price for it? Obviously not. A monopolist cannot fix a very high price for his product, firstly, because, such a policy may scare away the customers leading, thus, to a fall in the total sale; secondly, this will encourage consumption of substitutes; thirdly, such a policy may pave the way for potential competitors and lastly, the discontent and the agitation of the public, which are likely to follow, if a prohibitively high price is charged, may lead to the interference by the state and the price may be controlled by the public authorities.

To earn the maximum profit, the monopolist's interest is to sell as large an output as possibly he can, and at as high a price, as is possible for him, and also to reduce the cost per unit of the output, as far as is possible.

A high price may, therefore, bring in a larger profit for him, if the demand for his product is inelastic. When, however, the demand is elastic, a little reduction in the price may stimulate demand for his product and thus ensure a larger sale and, therefore, a larger profit. A lower price, may also ensure larger profit, resulting from larger sale, if the commodity is produced under conditions of the law of increasing returns. When, however, the commodity is produced under conditions of constant costs, the output he will produce will depend on the demand for his product.

**Discriminating Monopoly :** By discriminating monopoly is meant that the monopolist charges different prices for his identical product to different buyers, or, different prices in different markets, or, again, different prices for different uses of his product. Since the total supply is controlled by him, a monopolist is in a position to pursue a policy of price discrimination to obtain maximum profits, instead of charging a uniform

price from all. When such a policy of price discrimination is pursued, it is said to be discriminating monopoly.

Now, it is pertinent to ask, is it always possible for a monopolist to charge different prices to different buyers? Or, different prices for the same product in different markets? Or, again, different prices for different uses of the same goods or services? Such price discrimination, of course, is not always possible. It is possible only when, firstly, the markets are so different that, a unit of demand appropriate to one, is not in any way transferable to another market, and secondly, no unit of supply also is transferable from one market to another.

The reason is obvious. For, were such transfers possible, then there would be likelihood of re-sale of the commodities from the low priced to high priced market which is detrimental to the interest of the monopolist and hence, he cannot allow such transfers. Such re-sale is, however, not always possible. Take for instance, the case of direct personal services, like the services of a physician. A physician may charge a high fee from the rich patient, and at the same time, a very low fee from the poor patient. Obviously, the services the poor patient receives from him, cannot be re-sold by him to the rich patient, and, certainly, in such cases, discrimination is possible. Similarly, the rich would not prefer to be poor, for obtaining the cheap services of the physician.

Tariff, or cost of transport, or, the mere geographical position, may often separate markets and so prevent resale of the commodity sold by the monopolist, and in such cases, price discrimination is also possible by the monopolist.

When the monopolist charges different prices to different persons, it is said to be *Personal discrimination*. Similarly, when he fixes different prices for his product in different places, it is known as *Local discrimination*.<sup>1</sup>

<sup>1</sup> Dumping is an example of local discrimination. By it is meant that the same commodity is sold at a higher price at home, but at a lower price in a foreign country. A monopolist may adopt such a policy of dumping

Thirdly, when different prices are charged to different trades it is said to be *Trade discrimination*.

According to Prof. Pigou, discriminating monopoly may be of three types. In the first case, the monopolist is in a position to charge a separate price to each individual buyer or even different prices for the different units he buys, leaving, that is to say, no consumer's surplus for the buyer. This will be a case of discriminating monopoly of the *First Degree*.

Secondly, if the monopolist is in a position to make  $n$  separate prices of his products or services, in such wise that, all units with a demand price greater than  $x$  were sold at a price  $x$ , all units with a demand price less than  $x$  but greater than  $y$ , were sold at  $y$ , and so on, then it will be a case of discriminating monopoly of the *Second Degree*.

Thirdly, the monopolist may charge  $n$  different prices to  $n$  different classes of customers, who are distinguished by some *external* indiccs. The way in which the Railways discriminate, that is, charge different fares from different classes of passengers who are, however, free to decide the classes in which they will travel, is an illustration of such type of discrimination which is known as the discrimination of the *Third Degree*.

**Is Monopoly always an evil?** Competition, it is said, leads to progress. Existence of monopoly, that is, absence of competition is, therefore, sure to impede healthy progress of the industry. Not infrequently, again, the unwise policy of charging a very high price by a monopolist, rouses suspicion and bitterness in the minds of the people, who, therefore, regard monopoly as a positive social evil and do not hesitate to denounce its existence. Similarly, criticisms are levelled against a monopolist, when he adopts a policy of price discrimination, that is, of charging different prices to different persons in such a way as no consumer's surplus is left which is impossible under perfect competition.

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for various motives, *e.g.*, to capture new market or, to secure economies of large scale production, or, again, simply to dispose of piled up goods produced as a result of wrong anticipation of demand.



Of course, it will definitely be a bad policy for a monopolist to charge a very high price for his product. But as we have seen before, it is not possible on the part of a monopolist to charge a very high price, nor is it in his own interest to do so. For, such a policy will encourage the use of substitutes, invite competition, incur displeasure of the public and may also lead to interference by the state. Again, in some cases, existence of monopolies, may be reasonably justified, *e.g.*, in the case of legal monopolies, which the law creates by granting copyrights, etc. Also, on economic and social grounds, sometimes competition should be restricted, *e.g.*, in the case of public utility services, like the supply of gas or electricity, etc. Similarly, discriminating monopoly is not always an evil, since, such discrimination is made when the degree of ability of the buyers differs. The abler one, that is to say, is made to pay a higher price. Such a policy is, at least a better policy than charging a higher price to all customers, rich and poor alike, to raise the same amount of monopoly revenue. It obviously does not hit the poor as hard as the other policy, that is, of charging a uniformly high price to all, does.

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## CHAPTER 18

### PRICING UNDER IMPERFECT COMPETITION

**When is Competition Imperfect?** We have discussed so far the problem of pricing under perfect competition and in monopolistic situation. But in actual life, taking things as they are, we neither find perfect competition, nor do we find, pure monopoly. That is, in reality, neither there are so many buyers or sellers the effect of whose individual actions may be said to be negligible, nor, on the other hand, do we find a single buyer or a single seller, acting alone, influencing in some measure, the 'terms of exchange'. By imperfect competition, we refer to these intermediate cases, which exist in actual life in between the two extremes, namely, perfect competition and pure monopoly.

There may be several causes leading to imperfect competition. For instance, the competition will be imperfect when, firstly, there are a few sellers, instead of a large number of sellers and each is in a position to influence the price of his product. Entry of many producers may, either be restricted by law, as we have seen, or, may be prevented by the need for huge initial capital outlay, which not many can afford *e.g.*, in the case of manufacturing of automobiles.

Similarly, the competition will be imperfect when the number of buyers for a commodity is few and each, therefore, is in a position to influence the price by buying more or less of it. As for example, when the buyers of raw materials, or, other factors of production, are few in number.

Thirdly, the buyers, as is assumed in perfect competition, may not always buy from the seller offering the commodity at the lowest price, and when such is the case, the competition becomes imperfect. And, there may be several reasons which prevent a buyer from buying a thing from the seller who offers it at the lowest price. For instance, he may not be willing to make

personal enquiries as to the different prices charged by different sellers and so, may not know the different prices charged. Inertia and ignorance, therefore, may often prevent a buyer from buying from the seller who offers the commodity at the lowest price. Secondly, he may also be prevented by the high cost of transport. Thirdly, the buyers may believe, either for successful advertisement, or for whatever reason, that the product of some producer is superior to that of others and, therefore, buy from him. There may be, that is to say, real or imaginary differences in the quality of the products offered for sale by different sellers which lead to imperfect competition. Finally, not infrequently, the buyers are influenced by the type of facilities like, prompt service, courtesy and dealings of the seller, etc., provided by different sellers, and choose to buy from some and not from others.

**Monopolistic Competition:** The sellers may offer either identical products or slightly differentiated products. Assuming the number of sellers to be very large, the first would be a case of pure competition, but in the second case, that is, when there exists product differentiation, although each of the producers has an absolute monopoly of his product, yet each of them is subject to the competition of almost similar products—the imperfect substitutes, of other producers. Now, since each of these sellers is a monopolist and yet has competitors, they may be said to be, ‘competing monopolists’ and the nature of competition may be described as the ‘monopolistic competition.’

The term monopolistic competition may also be used in a more general sense, that is, merely to ‘describe the blending of monopolistic and competitive elements, thus embracing both types of hybrid problems.’<sup>1</sup>

Differentiation of the products may, however, be based on the various characteristics of the products themselves *e.g.*, trademarks, trade names, singularity or peculiarity of colour, style, package etc. Differentiation may also exist with res-

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<sup>1</sup> Chamberlain—Monopolistic Competition, p. 9.

pect to the conditions surrounding the sale of the product, *e.g.* seller's location, his reputation for fair dealings, courtesy etc.

In so far as these conditions differ from seller to seller, the product in each case is different for "buyers take them into account, more or less and may be regarded as purchasing them along with the commodity itself."<sup>1</sup>

Monopolistic competition<sup>2</sup> is thus a case of imperfect competition, and is different from either pure monopoly or from pure competition and it concerns itself with both the problems of an individual equilibrium, that is, the ordinary theory of monopoly, and the problems of a group equilibrium, that is, the adjustment of the economic forces with a group of monopolists who are themselves competitors.

**Pricing under Imperfect Competition :** When competition is perfect, we have seen, firstly, that the number of sellers is very large, and since each produces a very negligible portion of the total output, none of them, acting alone, is in a position to influence the price, and secondly, under perfect competition, the price will be equal to the average cost of the firm and also equal to the marginal cost, that is, the cost of the last unit produced. Thirdly, the cost of any factor of production under perfect competition, is what it would earn in other alternative uses, that is, it is equal to its opportunity cost or, to its marginal product.

How do the conditions differ when the competition is imperfect? Or, in other words, how does the problem of pricing differ when the competition is imperfect? In the first

<sup>1</sup> Chamberlain—Monopolistic Competition, Ch. IV, p. 56.

<sup>2</sup> Monopolistic Competition may also be described as a situation in which the sellers have some preference for some particular buyer or buyers, and, therefore, they would prefer to sell to one buyer rather than another, although the same price may be offered by all buyers. It is, as in the case of monopolistic competition, a non-price competition, but it is on the buying side of the market. Now there may be various reasons for such preference of one buyer over others *e.g.*, his (buyer's) reputation, or he may be a 'steady customer,' or, may be, that he always takes prompt delivery, etc.

place, the producer is not obliged to accept the prevailing price. This is so, simply because the number of producers, when the competition is imperfect being few, the price can be influenced by each of them, acting individually, by varying the output they produce and offer for sale. As we have discussed before, because of the ignorance and inertia of the buyers, high transport costs, etc., the producers, in an imperfect market, are in a position to charge a slightly higher price for their products without scaring away the customers.

In the second place, the demand curve facing the producer in an imperfect market is less than perfectly elastic, whereas, the demand curve which faces the producer in a perfect market is perfectly elastic. In other words, to ensure larger sale, the former has to lower the price, while it is not necessary for the latter, that is, the producer in a competitive market to do so. For, he will expand his output until his marginal cost becomes equal to the average cost, which is equal to the price. A firm in an imperfect market will, therefore, expand its output until its marginal cost becomes equal to the marginal revenue, which will be less than the price, since the demand is less than perfectly elastic and additional output can be sold only at a lower price.

Let us take an illustration. Suppose, for example, that when the price of say, suitcase, is Rs. 40 each, Mr. A sells 25 suitcases and his total revenue thus is Rs. 1,000. Since Mr. A can sell more suitcase only at a lower price, let us suppose that he reduces the price to Rs. 39 in order to sell 26 suitcases. Now, this implies that the price he gets for the 26th suitcase, that is, Rs. 39 is added to his revenue. But at the same time, it also implies that, all the other units are sold by him at this lower price, that is, Rs. 39 only. Mr. A's addition to total revenue will, therefore, be equal to the price of this additional unit, that is, Rs. 39 minus a reduction in the price of all the other units, that is, Re. 1 less in the case of all the other 25 suitcases. His total revenue, by selling 26 suitcases, at the lower price viz., Rs. 39 will, therefore, be Rs. 1,014. The marginal revenue

*i.e.*, Rs. 14 is lower than the price at which the extra unit is sold by Mr. A.

When the competition is imperfect, the marginal revenue thus is lower than the value of the marginal product, or the price at which the additional unit is sold. The monopolist will, therefore, expand as long as the marginal cost is less than the marginal revenue, and stop when they are equal, that is, when the marginal cost and the marginal revenue become equal. It is, therefore, in the interest of the producer in an imperfect market to restrict his output and offer for sale a limited output at a price which is higher than the marginal cost of production, to obtain maximum profit. He will cease to produce an additional unit before the price (which has to be reduced to ensure additional sales) declines to the level of the marginal cost, since his marginal revenue is lower than the price, as we have seen. Firms, therefore, which are of less than the optimum size exist when the competition is imperfect. But under perfect competition it cannot be like this. The competing firms under conditions of perfect competition will expand their output until their marginal cost becomes equal to the average cost, which is equal to the price. When the industry will be in equilibrium, there will, therefore, remain a number of optimum firms and the price will be equal to the marginal cost, as well as, to the marginal revenue whereas, when the competition is imperfect, the marginal cost will be equal to the marginal revenue but not equal to the price.

Finally, it should also be remembered that the selling costs, that is, expenditures incurred on advertisement, etc., enter into the cost of the producers, when the competition is imperfect. But we know, the demand curve which faces the producer in a competitive market, is perfectly elastic and hence, he is in a position to sell the amount he produces at the prevailing market price. Such additional expenditures, which are considered as 'wastes,' resulting from rival advertisement, etc., and are included in the selling costs, are found when the competition is imperfect.

**Pricing when the Competition is Monopolistic :** Product differentiation, we have seen, gives rise to what is known as monopolistic competition. In such a situation, each seller manages to have a market of his own, in the sense, that a group of buyers remain attached to him irrespective of the slight difference in the price. These buyers will buy the commodity produced and offered for sale by this particular seller, unless, of course, the price difference becomes very great, in which case, they may choose to buy from other sellers, since their products, after all, are substitutes, though 'imperfect' ones. No firm, therefore, can afford to raise the price of its product very much, for, that will encourage consumption of the products of the rival producers.

Firms producing when the competition is monopolistic, however, indulge in what is known as a non-price competition, that is, through advertisements, propaganda, etc., and thus attempt to create an impression in the minds of the buyers of product differentiation to attract them by counter-acting similar attempts of rival producers.

The demand curve which faces a monopolist, we know, is less than perfectly elastic. A firm, therefore, when the competition is monopolistic, will expand until the marginal cost is equal to the marginal revenue which, again, is less than the price, and even though a further expansion may ensure a further reduction in the average cost. The demand curve, on the other hand, which faces a competitive producer, is perfectly elastic and so, he expands his output without the fear of not being able to sell and stops only when the marginal cost is equal to the price and also it is equal to the minimum average cost. Hence, in the long run, when the competition is perfect, there will exist a number of firms of optimum size—each producing at minimum average cost, whereas, when the competition is monopolistic, firms of less than optimum size, as we have said before, will exist.

## CHAPTER 19

### SPECULATION

**What is Speculation ?** Speculation or dealing in futures means buying and selling a commodity (in anticipation of future events) with a view to make profit from the difference between its present and future price. A speculator, in order to make profit from such difference in the price of a commodity, will buy or sell a commodity when he anticipates a rise or a fall in its price in future.

The growth of a speculative market is greatly facilitated when the commodity is gradable and is a staple product having a regular demand. Speculation is also encouraged when the supply of a commodity is irregular and uncertain.

**Economic Functions of Speculation :** Production in these days has become extremely round about and the manufacturers have to produce in anticipation of future demand. This involves no small risk, for, future events may falsify such anticipation and in consequence, instead of making profits they may incur losses. Such risks hinder productive activities. Speculation greatly benefits the society by eliminating these risks and thus promoting smooth course of consumption, production and exchange. For, the most important and significant economic function of speculation is to promote the establishment of equilibrium between supply and demand in the market, by reducing the fluctuations in the prices.

Violent fluctuations in the prices are eliminated in the following way : when, for instance, there is likelihood of a rise in the price of a commodity, the speculator buys the commodity at once for future use. This leads to a rise in the price of the commodity now and checks consumption. The future rise, therefore, is not so great or sudden as it would otherwise be. Similarly, when a fall in the price is anticipated, he restricts his purchase of the article now and decides to buy later.



This leads to a fall in price now and encourages consumption. The fall in price in future will not be so severe or sudden as it would otherwise be. Such activities of the speculators prevent sudden fluctuations of prices and bring proper adjustments between demand and supply of a commodity. In technical language, when a speculator anticipates a fall in the price of a commodity he will "sell short," *i.e.*, he will enter into a contract to deliver at a future date goods which are not in his possession now. A sudden slump in future price may thus be avoided if several speculators sell 'short', for such action of theirs would depress the price and gradual decline in price would encourage consumption and to a certain extent absorb the excess supply of the commodity. The speculators who speculate for a fall in price are called the 'bears'. Bears pull down prices.

A speculator will 'buy long' when the price of a commodity is low and he anticipates a rise in price in future *i.e.*, he will buy more than what is required at present with a view to sell at a profit at a future date. A sudden *spurt* in future price may be avoided if several speculators thus 'buy long', for, their action would send up the price and this would check consumption and secure a better adjustment of the demand and supply. The speculators who speculate for a rise in price are called the 'bulls'. Bulls toss up prices.

The speculators thus take the risk of anticipating future changes in demand, supply and prices of commodities and endeavour to stabilise prices and hence, help the society enormously.

Activities of expert and well-informed speculators also serve as a guide to the manufacturers. For, they will produce a commodity more or less according as the speculators foresee a rise or fall in its demand, and hence, begin to buy or sell it. In this way, they also help to secure a better allocation of resources between different commodities.

Speculators also relieve the manufacturers of the anxiety of the fluctuations in the prices of raw materials which may con-

vert their profits into losses. For, they themselves assume the risks and enter into future contracts with the manufacturers for future delivery of raw materials at a fixed price. Production thus, is increased by the assumption of the risks by the speculators. The manufacturers themselves may also enter into what are known as 'hedging contracts'.<sup>1</sup>

Just as the dealings in produce exchanges benefit the producers of a commodity so the speculation on the stock exchanges in securities of various kinds promotes healthy investment of capital. The Stock Market quotations are a very helpful guide for the lay investors desirous of profitable investment of their savings. Speculation in the 'futures' market has also a stabilising influence, since it helps to maintain an equilibrium between the present and future prices of securities.<sup>2</sup>

**Evils of Speculation :** No doubt legitimate speculation greatly helps productive activities and is beneficial to the society. But illegitimate speculation *i.e.*, speculation by ignorant and ill-informed and reckless persons is equally harmful to society. These persons in order to make abnormal profits often indulge in gambling and their activities result in severe fluctuations in prices. They often endeavour to artificially manipulate prices with a view to make large profits but such actions are extremely detrimental to the society as a whole. Unscrupulous speculators often spread false rumours and also try to 'corner' a commodity in order to earn monopoly profits. Speculation in the stock exchanges by unscrupulous speculators is fraught with grave possibilities in as much as it affects both the investment of capital and employment. The function of a stock exchange is to secure easy transferability of shares and

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<sup>1</sup> When, for instance, a miller buys wheat for his business, he may also sell it for future delivery, that is, at the time when he hopes to be ready with the finished product, so that, if for some reason or other, the price of wheat falls, the loss resulting from a consequential fall in the price of wheat flour is offset by his gain in selling wheat at a price higher than the prevailing low price in the market.

<sup>2</sup> Contracts in which delivery of goods is to take place at some future date are known as 'futures'.

to ensure flow of capital into productive investment. But speculative activities may result in undue fluctuations in the value of shares—the operations of the ‘Bulls’ or the ‘Bears’ may create undue optimism or pessimism. A great advantage of competitive speculation is that it improves upon the distribution of consumption over time but when speculation is aggressive or monopolistic, instead of ironing out the price differences, it aggravates such differences and the competitive forces are not allowed to bring about an equalisation of prices over time and space. Such aggressive speculation also prevents the most advantageous allocation of resources and hence, is very harmful.<sup>1</sup>

**Remedies :** While legitimate speculation is beneficial to the society, illegitimate speculation is positively harmful and steps should be taken to stop such speculation. But so far no satisfactory remedies have been suggested. Suitable legislation hardly proves effective in stopping such speculation. Illegitimate speculation or gambling may, however, be checked by prohibiting dealings in *futures* altogether but this is not desirable, for, in that case the society has to forego the various advantages of such dealings in *futures*. Hence, the most effective remedies seem to be to develop the sense of social responsibility of the people and to create public opinion against gambling sufficiently strong to put a stop to it. The evils of speculation in the stock exchanges may be remedied by proper scrutiny by responsible stock exchange committees and through revision and enforcement of the rules made by the exchanges themselves. Greater regularity of production of all industries would also to a considerable extent, lessen speculation by lessening price fluctuations. Finally, the evils of monopolistic or aggressive speculation can be remedied by what Lerner calls ‘counter-speculation.’<sup>2</sup>

<sup>1</sup> Lerner describes speculation as aggressive or monopolistic, when a few rich and powerful persons, with a view to make large profits endeavour to manipulate the market price by their own bulk transactions.

<sup>2</sup> Lerner—The Economics of Control.

The government, that is to say, can prevent manipulation of prices by a few powerful speculators by setting up an agency of its own with a view to fix up appropriate prices and guarantee them to the buyers and sellers. Such statutory price-fixation backed by the resources of the government will succeed in remedying the evils of aggressive speculation.

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## BOOK V

### CHAPTER 20

#### THE THEORY OF DISTRIBUTION

**The Meaning of Distribution :** The agents of production, namely, land, labour, capital and organisation, acting in co-operation with one another, produce the National Income.<sup>1</sup> The problem of distribution, therefore, is the problem of distributing this Income amongst these four factors of production. What, that is to say, is produced by these factors, acting in co-operation with one another, is divided among them as their earnings, viz., land earning rent, labour earning wage, capital earning interest, and organisation earning profit. Obviously, the larger the National Income, other things being equal, the larger will be the share of each of these four factors of production.

The theory of Distribution has, therefore, to explain how the National Income flows through different streams and reaches the four main social groups, namely, the landlords, the labourers, the capitalists, and the entrepreneurs.

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<sup>1</sup> There are, however, certain differences of opinion as to the concept of National Dividend or National Income. For instance, according to Marshall, National Dividend means the net aggregate of goods and services produced during the year. "The labour and capital of a country", says Marshall, "acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds." This net aggregate, according to Marshall, is the National Dividend.

Prof. Fisher defines National Dividend as that part of the annual produce of the community which is directly consumed during the year. It is thus the 'net consumable income' during a year.

According to Prof. Pigou, by National Dividend is meant, "that part of the objective income of the community, including, of course, income derived from abroad, which can be measured in money."

It may be said, that while Marshall's definition is more logical and usually accepted in theoretical discussion, Prof. Fisher's definition is useful for certain purposes, *e.g.*, it is useful when we want to compare the standard of living in one year with that of another year.

Prof. Pigou's definition, though he uses the term in a narrow sense, and has certain defects, (*e.g.*, it excludes the personal services), is very helpful for purposes of calculation and is generally accepted by the statisticians.

It should, however, be noted that the theory of Distribution is a theory of pricing of the productive services and, in this sense, it is an extension of the theory of value, studying the forces which govern the prices of the factors of production. It does not study how an individual's income is determined. The theory of distribution thus deals with the problem of *functional* distribution, that is, with the problem of determination of the earnings of the factors of production, and not with that of the personal distribution, that is, with the problem of the distribution of an individual's income.

The problem of distribution, thus, is the problem of pricing of the productive services of the factors of production. While studying the theory of value, we have seen, that different amounts of a commodity will be demanded by consumers at different prices, and ultimately, the value of a commodity is determined by the conditions of demand for and the supply of the commodity. In the same way, the price a firm, or a producer, has to pay for the services of a factor of production, will depend upon the conditions of demand for and supply of this factor at different prices.

**Demand for the Productive Services of a Factor :** The services of a factor of production are demanded not for their own sake but for the production of commodities ultimately to be consumed by the people. The demand for the services of any factor of production will be great or small, according as the demand for the consumer's goods in the production of which it is used (along, of course, with other factors) is more or less. The demand for the productive services of a factor, thus, is a derived demand. The relevant question which presents itself now is : what considerations will govern a producer's demand for the services of a factor of production, or, in other words, how long will he continue to employ the services of any factor of production ? The National Dividend, or the National Income, is distributed amongst the agents of production, observes Marshall, "in proportion to the need which people have for their

several services, *i.e.*, not the *total* need, but the *marginal* need." By marginal need is meant, "the need at that point at which people are indifferent whether they purchase a little more of the services (or, the fruits of services) of one agent, or devote their further resources to purchasing the services (or the fruits of services) of other agents." This brings the question of determination of the marginal productivity of a factor, and, we should, therefore, discuss the theory known as the Marginal Productivity Theory of Distribution.

**Marginal Productivity Theory of Distribution :** Each factor of production, according to this theory, is paid for its services the sum equal to the value of its marginal net product. Obviously, the demand price which a producer will offer for the services of a factor of production will not be governed simply by its productivity. It is governed by its productivity at the margin, or its marginal productivity. Just as a buyer ceases to buy a commodity when its marginal utility to him becomes equal to the price he has to pay for it, in the same way, a producer will cease to employ any more unit of a factor when its marginal productivity becomes equal to the price he has to pay for its services. The earnings of any factor of production for its services thus tend to be equal to the value of its marginal product.

How are we to determine the marginal productivity of a factor? The marginal productivity of a factor is equal to the value of the additional product which a producer obtains by employing an additional unit of that factor at its existing price, while the supply of all other factors remains constant. The marginal product of a factor, thus, is the net addition made to the total revenue by the last unit of the factor employed.

To put the same thing in another way. The number of units added to the total output when one more unit of a factor of production is employed is the marginal physical product. By multiplying this number of units by the price of the product

we can know the marginal gross value of the product. And, we can know the marginal net product of the factor, if we deduct from this marginal gross value product, all other additional costs except the payment made to the added unit of the factor. "The marginal net product of any factor is the net value of the contribution to output made by a marginal unit of the factor when combined with the appropriate quantity of other factors ; a "marginal unit" being *any* unit of the factor when engaged in the least productive use to which it is put ; and 'net value' being understood to mean the total value less the cost of extra units of the other factors." <sup>1</sup>

It will, therefore, be profitable for a producer to employ additional units of any factor so long as the marginal cost he incurs, in order to employ the additional unit, is less than the marginal productivity of the factor. But continuous employment of additional units of any factor will not result in proportionate increase in the output. Sooner or later, the law of diminishing productivity will operate, that is, just as the utility of a commodity diminishes when one gets more of it, so the productivity of any factor of production will diminish when more and more of it will be employed. The output may increase as a result of employment of more and more units of a factor (while the supplies of the other co-operating factors remain constant) but, sooner or later, a time will come when employment of further units will result in an increase in the output but less than proportionately. And, the producer will cease to employ any more units of it when his marginal cost becomes equal to the marginal productivity of the factor. The marginal productivity of the factor thus is measured by the net amount added to the total revenue by the last unit employed, and the price the producer pays for the productivity of this unit will be, assuming perfect competition, the price of all other units of the factor.

It should, however, be noted that the rate at which the marginal productivity of a factor diminishes depends upon the

<sup>1</sup> Cairncross—Introduction to Economics, p. 229.



ease with which the additional units of it can be substituted for other factors. In other words, it depends upon its "substitutability." In order to maximise his profits, a producer will alter the quantity of the factors he employs, and he will continue to do so until the price he has to pay for each unit of them becomes equal to their marginal net products. In equilibrium, therefore, the earnings of each factor will be equal to its marginal productivity. This, in other words, is to say that a necessary condition of equilibrium is that the producer must be using the least cost combination of the factors of production. If he is likely to gain by employing more labour and less capital, or more capital and less labour, then his firm is not yet in equilibrium in respect of its demand for the factors of production.

**Criticisms :** The theory of Marginal Productivity has been criticised on several grounds. It is said, that the theory presupposes that the proportions in which the factors of production are combined can be varied, and also it is possible to measure the productivity of each factor of production. But neither of these assumptions is valid. For, the amount of different factors to be combined in production is determined by the technical co-efficients of production. Variation in the use of one factor, without a corresponding variation in the use of the other co-operating factors, is unlikely to yield more. Again, we cannot disentangle the contribution of a single factor when it is used in conjunction with other factors. Can we, for instance, say, how much of the wood cut by a lumberman is to be attributed to his labour, or how much to the capital sunk in the axe, or, how much he obtains due to the fertility of the soil ? <sup>1</sup> Obviously, we cannot, and the marginal analysis helps us neither, since without the axe, i.e. if he does not possess an axe, no timber can be cut and hence, the lumberman's productivity will be nil ! How can we, again, determine the productivity of the axe, if he possesses it ? Production is thus the

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<sup>1</sup> This example, taken from the Introduction to Economics by A. Cairncross (p. 228), nicely illustrates the point.

result of co-operation of all these factors and, taken singly, no factor can produce anything. Every product is a joint product, and cannot be attributed either to capital, to labour or to the land taken singly. The theory of marginal productivity states, observes Maurice Dobb, that "given a certain relation between the supply of various factors of production, the total value produced must be shared in a particular way. If one can assume the supply of the various factors as 'constants', the theory is adequate. But in practice one cannot make this assumption, and the theory tells one nothing about the way that variations in these factors are themselves related, which is the fundamental issue."<sup>1</sup> Secondly, it is asked, does the marginal net product afford an accurate measure of the services of a factor? Supposing we withdraw a single unit from production, will it not disorganise the business as a whole and consequently, diminish the productivity of all other factors? Certainly it will, and this simply means that diminution in the total output consequent upon the withdrawal of the marginal unit will be much greater than can be attributed to that unit alone. We are, therefore, led to the obvious conclusion that, the sum of the marginal net products of all factors determined separately will be greater than the actual total product, surely an impossibility!

When, however, the units are not lumpy, that is, not indivisible, but are infinitesimally small, withdrawal of one unit may not disorganise the business appreciably, and thus may not also affect the productivity of the other co-operating factors appreciably.

Thirdly, how to measure the marginal productivity, when the commodities are produced under conditions of increasing returns? Under such circumstances, it is likely, that given sufficient time for adjustment, the marginal productivity of a unit of any factor will be considerably less to a particular firm than that to the industry as a whole, which will be in a position

<sup>1</sup> Maurice Dobb,—*Wages*, (1928) p. 84.

to secure the advantage of the additional unit and the consequent economies of the scale.

Fourthly, the theory of marginal productivity ignores the influence of supply of the factors and seeks to explain the influence of the demand in determining the earnings of the factors taking the supply as given. But in fact the supply of the factors are not fixed. Instead, it varies considerably in accordance with the prices offered to secure them.

It is thus clear that the marginal productivity, or the marginal net product of any factor, depends upon several other factors besides its productivity as such. Finally, the assumptions of homogeneity of all the units of the factors, and their substitutability at the margin, are as unreal as are the assumptions of the prevalence of perfect competition and existence of full employment.

We have so far discussed the theory of marginal productivity on the assumption of the existence of perfect competition. But when the competition is imperfect, the price which will be offered to the factors will not be equal to their marginal products but less than those. We should, therefore, discuss briefly the problem of Distribution, or of pricing of the factors of production, when the competition is imperfect.

**Prices of the Factors when the Competition is Imperfect :** Not infrequently, it is found that the number of buyers of raw materials, for example, of minerals, or of labour, etc., are very few, that is, on the buying side there exists an element of monopoly in these markets. In such circumstances, a monopsony, *i.e.*, a single buyer, is in a position to exploit the factors of production of which he is the sole buyer, that is, he may pay these factors less than the full value of their marginal products. The demand curve which faces a firm when the competition is imperfect, is, we know, less than perfectly elastic. And the marginal revenue product, that is, the amount which is added to the firm's total revenue when one more unit is added to the already employed units is equal to the value of the additional

unit of the product *minus* the loss due to the decreased price of all previous units of it. When the competition is imperfect, the marginal revenue product of a factor is less than the value of the additional product, that is, the value of the marginal product. Under imperfect competition, therefore, there exists such exploitation and the factors ~~earn~~ less than the value of their marginal products.

It is also possible that when the competition is imperfect, a monopsony may be in a position to buy each unit of any factor by paying the lowest price it is willing to accept, instead of paying the same price to all the units of the factor. In other words, monopsonistic exploitation or exploitation by a monopsony, may as well, take the form of price discrimination. Possibility of such price discrimination will obviously be more when the sellers are separated geographically, and thus, are not in a position to compare the prices with one another.

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## CHAPTER 21

### RENT

**The Concept of Rent analysed : The Modern View :**  
By rent is commonly meant the income derived from the ownership of land and other free gifts of nature. Land, a free gift of nature, simply exists, and does not need any payment to overcome any disutility, as is necessary in the case of labour or capital. Land, that is to say, does not need any such payment as an inducement to exist. That is why the term rent has always been associated with an income from land.

There is, however, no reason why the term rent should be reserved and used in connection with land alone. Any income earned by any unit of a factor of production, other than land, which is in the nature of a surplus, that is, excess over what is necessary to pay to the last unit of the factor to retain in its present occupation, is rent. The surplus of receipts, which a unit of a factor of production gets over its minimum supply price, thus, is rent in economics. And such a surplus may as well be earned by factors other than land. For instance, suppose that Mr. A is willing to do a particular type of work, for, say, Rs. 100 per month. Suppose, further, that the demand for the product he is engaged in producing increases necessitating employment of more workers. But these workers are not willing to work, unless they are paid a sum of Rs. 125 per month. Obviously, now Mr. A also will receive Rs. 125. Hence, this sum of Rs. 25, that is, the difference between the amount which he now gets and that for which he was willing to work, arising because of the greater demand for the services of other workers is the rent which Mr. A earns.

Hence, it is only when the supply of any factor of production is less than perfectly elastic, that rent arises. If we assume perfectly elastic supply of any factor, then naturally there will be but one supply price of that factor, the market

price, and at that price more units can be obtained if the demand for the factor increases. But what happens when the supply is less than perfectly elastic? Obviously, at first only those units will be used whose supply price is lowest, and these units earn no rent. But supposing the demand increases necessitating employment of higher and higher-priced units of the factor. Naturally, those units whose supply price is lower, will, in such circumstances, also be paid the same market price which is paid to those higher-priced units which are just forthcoming, and thus will earn a surplus, that is, rent.

**Ricardo's Theory of Rent :** There are certain properties inherent in land, *e.g.*, heat, light, etc., which do not depend upon human effort. All lands, however, do not possess these properties in the same proportion. Some are, therefore, more fertile, while others are less fertile. Superior or more fertile lands, thus obtain a surplus because of their differential advantages in production over inferior or less fertile lands. This surplus, according to Ricardo, is rent. In the words of Ricardo, "that portion of the produce of the earth which is paid to the landlord for the original and indestructible powers of the soil" is rent.

The question of payment of rent, however, does not arise so long as there is no scarcity of best lands by cultivating which the demand for food is satisfied. But the supply of best land is limited, and assuming increased demand for food, due to increased population, less fertile, that is, the next best lands, will naturally be brought under cultivation to meet the demand for food. Or, recourse may be had to intensive cultivation of the best lands. But sooner or later, the law of diminishing return will come into operation, and the additional doses of labour and capital employed in the same land will yield less than proportionately.

In either case then, that is, either bringing more and more inferior lands under cultivation, or applying more and more labour and capital in the more fertile land, production will mean production at increased costs since in either case, the law of

diminishing return will operate. And the process *i.e.*, either bringing more and more inferior lands under cultivation, or, employing more and more labour and capital in the same land, will continue so long as it is considered profitable, that is, as long as the price of the produce is more than the average costs of the marginal land. When, however, the price will be equal to the average cost of the marginal land, or of the marginal dose of labour and capital in case of intensive cultivation, no further cultivation of still inferior lands, or application of labour and capital on the same fertile land will be made since, in either case, that will mean positive loss. In either case, again, that is, whether we resort to extensive, or to intensive cultivation, rent will arise. In the first case, that is, when land is cultivated extensively, the average costs of the superior land will obviously be lower than the average costs of the marginal piece of land, and hence, there will arise a surplus to the superior land, which is rent. Similarly, in the second case, that is, when we resort to intensive cultivation, this surplus will arise in respect of the earlier doses of labour and capital employed (yielding more at lower cost) over the marginal dose. This surplus will be rent.

It is thus possible to explain this concept of rent with reference to both extensive and intensive cultivation. The lower will be the average cost of the superior land, (or, of earlier doses of labour and capital in case of intensive cultivation) relatively to the marginal cost, that is, the average cost of the marginal piece of land, the greater will be this surplus, *i.e.*, the rent. It is, however, to be noted that no such surplus would be possible were there no such law in operation as the law of diminishing return, because, in that case, there would not be any differential surplus since only the best lands would be cultivated to meet the demand for food.

Rent, or the producer's surplus, is thus the surplus in produce which accrues to the superior lands over the produce of the marginal land, assuming, of course, that the area is the

same and that, the doses of labour and capital applied also are the same.

It is clear from the above discussion, that rent, as it was understood by Ricardo, does not and cannot enter into price. Instead, it is itself governed by price. Rent is a price-determined surplus and thus cannot and does not enter into price. The price of the product, under perfect competition, will be equal to the marginal cost of production, that is, the cost of production on the marginal land, which obviously would be withdrawn from cultivation, if the price of the produce does not cover the cost of production. And, since rent is a differential surplus, no rent is paid by the marginal land and obviously, therefore, rent is not an element in the cost of production. This is why, it is said, that the rent is a price-determined surplus and does not, therefore, enter into price. High prices are, therefore, causes of high rent but not vice-versa. When the cost of production on the marginal piece of land is high, the price of the product will also be high, yielding, therefore, a surplus, that is, rent, to the superior lands (whose cost of cultivation is lower than that of the marginal land).

**Criticism :** In the first place, it is asked, does land really possess 'original and indestructible' properties for the use of which, a part of the produce, that is, the rent, is paid to the landlord? Continuous cultivation, it is argued, exhausts the fertility of the soil. These properties are, therefore, not indestructible. Human efforts, again, add to the fertility of the soil. Granting, therefore, that land does possess some inherent properties due to climate, humidity, etc., how can we determine the properties which are 'original' and those, which are the results of human efforts? These are obvious questions which the theory does not answer.

Secondly, there is no reason to suppose, as did Ricardo, that best lands are invariably cultivated first, and then the lands of less superior fertility, and so on. It is not fertility alone which always determines which land is to be cultivated first. Situation is also an important factor which is taken



into consideration. Those lands, which are situated near human habitation, obviously will be preferred more and, therefore, will be cultivated first, even if they do not happen to be the most fertile.

Thirdly, Ricardo's theory that rent is governed by price, and does not enter into price is not always true. Rent can be said to be price-determined, and not price-determining, only if we are thinking of land in general, otherwise not. The underlying idea of his statement, that "Corn is not high because a rent is paid, but rent is paid because corn is high", is that increased demand for food brings inferior *i.e.*, less fertile lands under cultivation, and since the cost of cultivation of these lands will be high, which the prices of the corn must cover. the superior lands with lower cost of production, will obtain a surplus, which is the rent. Rent, thus, is a surplus over the cost of production. Land being a free gift of nature involving no disutility to overcome which payments need be made, its supply price is zero. Any payment, therefore, which has to be made for the services of land, thus, does not constitute a part of its cost of production.

This, however, would be true, that is, rent could be regarded purely as the result of the price of the product, and not a cost factor influencing either the output or the price, provided it is assumed, firstly, that the supply of land as a whole is under consideration, and secondly, that land is capable of producing only one product. If these assumptions are made, then only any surplus equal to the difference between the price of the product and the cost of production, may be regarded as rent. But such assumptions are obviously unreal. Land has several uses and more than one crop can be grown on land. Granted this possibility which is real, the supply price of land will cease to be zero for *any one purpose*. That is, land can be rented for growing rice only if its use is denied to other crops, say, wheat, etc., and, in that case, the rent which it might yield under most profitable of these crops, that is, the transfer cost of land, does enter into the cost of production and hence, also

into the price of rice. If, however, this 'transfer cost' is not met, the land will cease to be available for growing rice, and will simply cross the margin of transference into the next most profitable use—may be, for growing wheat or any other thing. Hence, if we think of land in general, economic rent is a surplus depending upon its differential advantages of fertility, situation etc., over other pieces of land. But if we think of *particular* agricultural products, rent is not a surplus over the cost of cultivation, but is itself a part of the costs, and thus it governs and is not governed by the price of the product. That part of rent which represents its 'transfer price' or the '*opportunity price*' should be considered as a part of the cost of production and, therefore, price-determining. There would not be any such element of 'opportunity price' or 'transfer price' in rent, if alternative uses of land were ruled out. And in that case, rent would be a surplus above the cost of cultivation, and hence, would be price-determined and not price-determining.

**Rent of Mines :** Mines, like agricultural land, are also free gifts of nature and in mines also the law of diminishing return operates in the sense that, when additional doses of labour and capital are applied, the yield increases but at a diminishing rate. But there is one important distinction viz., when worked, sooner or later, the mines will be exhausted, whereas, agricultural land, if properly cultivated, retains its fertility and hence, the question of exhaustion does not arise in case of agricultural produce from land whose supply is perennial.

How, then, is the rent of mines to be determined? The yield obtained from mines and quarries is different from the yield obtained from land. For, while the supply of agricultural produce from land is perennial, the more intensively the mines will be worked, that is, the more minerals will be taken out from within, the less will remain in the reservoir and, sooner or later, these will be completely exhausted or empty. There are thus no indestructible properties of mines giving rise to rent. It is, however, possible that one mine may have some

differential advantages *e.g.*, better situation etc., over other mines giving rise to a surplus analogous to rent. Like the rent of agricultural land, the rent of mines also can be calculated both with reference to extensive and intensive margins, that is, by comparing different mines or by examining the working of the same mine more intensively by application of additional doses of labour and capital.

The payments made by a lease holder of a mine, therefore, include, firstly, the royalty, which is calculated in proportion to the minerals taken out from the mine and secondly, the dead rent *i.e.*, the annual rent, calculated in the same way as the rent of agricultural land is calculated.<sup>1</sup>

**Rent of Fisheries :** The law of diminishing return also operates in fisheries, in the sense, that as a result of application of additional doses of labour and capital the returns increase but at a diminishing rate. And there may be differential advantages in respect of fisheries also—some being superior, that is, easily accessible with plenty of stock, and others inferior, that is, inaccessible and with poor stock. The superior ones, therefore, will earn a surplus equal to the difference between their yield and that of the marginal fishery. Similarly, an intensive margin may also be found by application of successive doses of labour and capital in the same fishery. And the surplus earned by application of the earlier doses of labour and capital over the marginal dose, will constitute rent.

**Other Types of Rent :** The term rent has been used to denote different types of income. We have discussed what is meant by economic rent. It may be helpful if a brief reference is made to the different senses in which the term is used.

**Contract Rent :** The owner of any durable good *e.g.*, a machine, a house etc., may, instead of using it himself, hire it

<sup>1</sup> Opinions, however, differ as to whether the royalty should be regarded as rent or not. Since royalty is paid as a compensation for the exhaustion of the mine, according to Marshall, it cannot be regarded as rent. But since any payment, either rent or royalty, cannot be made by the poorest mine, the royalties which are paid for the well-known mines are, according to Taussig, of the nature of rent.

out to somebody else in return for an agreed periodical payment. This is known as contract rent.

Thus a landlord may also lease a piece of land to a tenant for an agreed period who contracts to pay him a fixed sum during this period.

This contract rent includes, besides economic rent, that is, the sum which is paid for the use of the land, other payments *e.g.* interest on the capital which might have been invested by the landlord; payments for the supervision of the land which he has to make etc.

**Scarcity Rent :** Rent is a price which, according to some, is paid for the use of land because of its scarcity of supply in relation to its demand. There would not be any such payment were there no scarcity of land, and all lands were equally fertile and had similar situational advantages. Scarcity rent thus arises simply because, in reality that is not so, and there is scarcity of supply of land relatively to its demand.

**Differential Rent :** By differential rent is meant the surplus which the superior land gets over the marginal land assuming, however, that the area is the same, and the doses of labour and capital applied also are the same.

Differential rent may also be measured by the differences between the returns obtained by application of additional doses of labour and capital and that obtained by application of the marginal dose to the same piece of land.

**Location Value :** Two pieces of land, equally fertile and therefore, equally productive, may be located at different places. For example, one near the market or the railway station, and the other at a great distance from the market or the station. In this case, the first piece of land, that is, the one which is near the market or the station, will command a higher rental since the cost of transport of the products will be less. The sum equal to the difference in the cost of transport will thus be an addition to the economic rent of the land located near

the market or the station. This additional rent due to better location of any piece of land is called *Location Value*.

Location value in case of retail store sites depends upon the advertising costs, rate of ~~turnover~~, that is, the number of times the same value quantity of ~~goods~~ which can be bought and resold during a year, etc.

**Urban Site Rent :** Like agricultural lands, in case of urban lands also, high rentals are commanded by those areas which have some situational advantages over others. For example, some areas are associated with some social distinction and hence, may be popular for residential purposes. Some, again, may have some differential advantages over others for shopping purposes, that is, either because of sheer habits or because of laziness, people may prefer to buy in those localities and not elsewhere, even if they have to pay a little higher price. These sites thus may command high rentals. Similarly, for the sites where the rate of turnover is high (although the price is low), high rent may be obtained.

One thing should, however, be noted. There is a difference between the location value of agricultural land and that of the urban sites. The former *i.e.*, the location value of agricultural land is due to its nearness to a market or a station and thus mainly a function of cost of transport. The latter, that is, the location value of the urban sites contains a distinct monopoly element in it. It may be clear from the following :

Because of sheer force of habit or laziness, people trade in those localities which are most convenient to them. Ownership of a site in these areas thus carries with it a partial monopoly of the trade of this group of people, and hence, higher rental is possible in these localities. This, that is, enjoying high site rents would not be possible if people would buy from the dealer offering goods at the lowest price regardless of his location. In that case, the difference in site rent in different parts of a city would be due only to the difference in transport costs.

**Unearned Increment :** Not infrequently, value of land rises but for this rise the owners are not in the least responsible. When, for instance, in any locality industries grow or other improvements *e.g.*, improvements in communication, building of better roads, etc., are made, the value of the land in that area registers a rise. The owners of these lands thus earn an income because of the higher value of land, although, they are not in any way responsible for these improvements, *i.e.*, although these improvements are not the results of their efforts. That is why such extra earnings are called unearned increments.

There is, thus, a strong case for taxing these unearned increments in rents which the owners enjoy. And even confiscation of these incomes by the state is advocated by the socialists. But there are certain practical difficulties. For instance, a part of the rise in the value of land may also be due to the expenditures incurred by the owners themselves, or possibly by the land speculators to improve them. How then can we know how much of the rise in the value of land is earned and how much is unearned ? Again, is the state prepared to pay compensation if there is any loss due to a fall in the value of land ? These are the questions which surely raise certain practical difficulties.

**Quasi-Rent :** The supply of durable goods like plants, machinery etc., is in the short period fixed and cannot, therefore, be adjusted to demand if there is a sudden increase in it. The earnings of such durable goods, therefore, are analogous to rent *i.e.*, the earnings of land whose supply is fixed. The term quasi-rent has been used by Marshall to describe the earnings of those appliances of production whose supply is temporarily fixed. On the one hand, the producers do not have the time to increase these appliances if the supply of them is less ; and on the other, if the supply is more relatively to the demand, some of these appliances have to remain imperfectly employed, since, there is not the time for the supply to be much reduced by gradual decay and by conversion to other uses. The earn-

ings of these appliances thus during those times, do not for *the time* affect perceptibly their supply, nor therefore, the price of the goods produced by them : These incomes are a surplus of total receipts over the Prime (money) costs governed by relations of demand and supply for that time. And this surplus or excess, says Marshall, "has enough resemblance to that excess value of the produce of land over the direct cost of raising it, which is the basis of rent as ordinarily understood, to justify us in calling it a Quasi-rent."<sup>1</sup>

Strictly speaking, however, such incomes are different from what is known as rent proper. This is firstly because, the supply of land is fixed for all time to come but the supply of these goods is fixed only temporarily, that is, if we take into consideration a short period within which the supply has not time to be adjusted to increased demand. But if we take into consideration a long period, then more of these goods will be produced and the process of competition will, sooner or later, bring down the earnings to the normal level. This, however, is not possible in the case of earnings from land.

Secondly, land or other free gifts of nature yielding rent will surely exist and will be ready to contribute their part to production for all time to come even if no rent be paid. But in the case of these appliances, or durable goods, their earnings in the long run must be equal to the current rate of interest upon their current cost of production. If it is not so, then they will not be replaced when worn out. Their supply thus will fall. And assuming the demand for their products remains as before, higher prices will be offered so that the supply may again adjust to the demand. On the other hand, if the earnings of these goods are greater than this, that is, the current rate of interest upon their current cost of production, more of them will be produced bringing down thereby the prices of their products.

Hence, the fixity of supply of these appliances in the short

<sup>1</sup> Marshall—Economics of Industry, App. C. p. 427.

period gives rise to an income analogous to rent which is called Quasi-rent. This income will obviously vanish if we take into consideration a longer period. But even in the short period, will there always be quasi-rent because the supply does not have time to be adjusted to the increased demand? Or, in other words, will there be quasi-rent if we suppose, as is possible, that these appliances can be put to various uses? In this case *i.e.*, when they can be put to various uses, a fall in demand for them in one use may mean that they will shift to the next best alternative use and their income may not thus fall. It is only when we assume that there has been a fall in demand in all their various uses, that is, a change in the demand in the same direction in all the uses, that fixity of supply gives rise to what is known as quasi-rent. That is why 'specificity' rather than fixity may, strictly speaking, be said to be the real cause of quasi-rent.

"As a rule, goods whose supply will not rapidly be diminished in response to a fall in demand are also goods whose supply will not rapidly be increased in response to a rise in demand; although logically we should distinguish between these two classes, in fact they often coincide. The earnings of such durable and specific goods are of the nature of rent. The term quasi-rent is sometimes confined to the earnings of goods—machines, houses, ships, rubber plantations, and so on—but logically it applies also to the earnings of groups of workers, such as doctors, whose supply cannot rapidly be increased or diminished." <sup>1</sup>

**Growth of Population, Improvements, and Rent :** Changes in the number of population, improvements either in agricultural sphere, or in other spheres, obviously have repercussion on rent.

Increased demand for food due to increased number of population will necessitate cultivation of inferior lands, or of superior lands more intensively. In either case, the rent, *i.e.*,

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<sup>1</sup> Benham—Economics, p. 323.



the surplus obtainable by the superior or the intra-marginal lands, will be more. A fall in demand for food because of a fall in the number of population will conversely reduce this surplus. The amount of rent thus varies directly with the increase or decrease in the number of population.

Improvements in the methods of cultivation obviously will increase the yield without a corresponding increase in the demand for food and will force down the price of agricultural products. If these improvements affect the already richer lands, their rents will increase. But the rent will dwindle if these improvements affect the poor lands only, which, now would become as productive as the richer ones. Hence, there would not be any surplus *i.e.*, rent.

Similarly, improvements in communications, also affect rent. For, the cheaper the cost of transport, the greater the possibility of earning rent because of any situational advantage.

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## CHAPTER 22

### WAGES

#### **Peculiarities of Labour as a Factor of Production**

**Demand for Labour :** The demand for the factors of production, as we have seen, is derived demand. The demand for labour as a factor of production, therefore, is also a derived demand. That is, except in the case of personal services like the services of a nurse etc., employers do not demand the services of workers for their own sake. But they demand their services for the contribution which they (labourers) make to their, (the employers') output, and thereby to their receipts. In other words, the demand of an employer for the services of the labourers is derived from the demand of the customers for the product ultimately produced by the labourers. An employer is thus an 'intermediary' who is 'buying work in order to sell it 'embodied' in his product.' And the total demand for labour at any given time, thus, is the sum of the demands of all the different employers.

**Supply of Labour :** There are certain peculiarities of the supply of labour. In the first place, a labourer sells his labour but retains the property in himself. Obviously, therefore, those who bear the expenses of rearing and training a labourer receive in return, but very little of the price that is paid for his services in later years. Secondly, the seller of labour, as says Marshall, must deliver it himself. That is, when a labourer offers his services for sale he has to present himself where they are delivered. The sellers of other commodities are not thus inseparable from the commodity they sell. Thirdly, labour is extremely perishable. Hence, labour, specially manual labour, cannot be stored for a long time and the time lost while a labourer is unemployed is lost for ever. The labourers are, therefore, not in a position to withhold their labour for any length of time from the market. Finally, considerable time is

required to prepare and train the labourers for any particular work. Growth of new supplies of labour, therefore, is very slow.

Because of these peculiarities of labour, we cannot say as we can, in case of supply of other goods, that a definite cost of production governs its supply. The rate of wage, of course, influences the number of population in any country but it is only one among many factors which influence the growth of population *e.g.*, birth control, medical care of the infants, prevention of accidents, peoples' attitude towards marriage etc.

The supply of labour at any given time may, therefore, be known from the amounts of work that the workers are willing to offer for sale at different prices. In other words, this supply of labour is a function of two variables viz., (1) The number of labourers that are able and willing to work at each possible price and, (2) the number of hours that each one is able and willing to work at each price.

Obviously, with a given population, the supply of all labour in general, will be inelastic over a long period of time. And naturally, therefore, higher or lower wages largely depend on large or small demand for labourers by the employers. Of course, wages are determined by the demand for and the supply of labour in particular occupations and industries and not by the demand for and the supply of labour in general.

**Methods of Payment of Wage :** The share which labour, as a factor of production, receives as remuneration from the national dividend constitutes the wages. Wages, therefore, refer to the earnings of labour as a factor of production.

**Time Wage :** Sometimes wages are determined by the time during which the labourer is engaged. By time wage thus is meant the fixed payment which a labourer gets for his labour in any given unit of time, say a week, a month, or a year.

**Piece Wage :** Wages often are calculated on the basis of the output of the workers irrespective of the time they take.

When a labourer receives wage according to his output at a certain fixed rate per unit of output, it is said to be piece wage.

**Nominal and Real Wage :** The amount of money which is paid to a worker for his services in a given unit of time is said to be his nominal wage. Nominal wage of a labourer is his remuneration expressed in terms of money.

This money or cash wage, we know, often may be supplemented by various perquisites, *e.g.*, free coal, rent free quarter, etc. These perquisites form a part of the real wages paid to the workers. The real wage of a labourer thus consists of the amount of necessities and conveniences which he obtains in return for his services.

While, therefore, the nominal wage is the remuneration expressed in terms of money, the real wage of a worker consists of the goods and services which the money will buy for him. And while the nominal wages of workers in different occupations, and at different places may differ, it is possible, that their real wages may not. For instance, the nominal wage of two labourers, one of whom lives in Bombay and the other, say, in any small district town of India, may differ—the former earning more than the latter. But it is just possible that the latter can buy as much of commodities and services by his small wage as the former can buy in Bombay by his higher wage. The real wage of these two workers in this case, therefore, is the same although there is difference in their money wages.

The real wage of a worker, however, depends on several factors. In the first place, a higher nominal wage may mean a poor real wage if the level of prices is very high. The real wage of any worker thus depends on the purchasing power of money at any given time. Secondly, the nature of employment is also an important factor. While calculating the real wage of a worker, we have to consider, for instance, the length of the working period of a worker, the regularity or otherwise, of employment and all other monetary and non-monetary advantages and disadvantages associated with it. Pleasantness

or irksomeness, relative social esteem of different occupations should also be considered. Although the money wage is high, the real wage may be low, if the work is very irksome, and has no social prestige. Similarly, of two workers, the one with regular employment throughout the year may be better off than the other, who is employed though at a higher wage but only for a part of the year. Finally, the possibility of earning any extra income, the prospect of future promotion, opportunity of leisure, etc., should also be taken into account when computing the real wage of the workers.

From what we have discussed above it is clear that a labourer is better off not when his nominal wage is high but when his real wage is high, that is, when the amount of necessities and conveniences of life which the money wage can buy is more.

### **Determination of Wages : Different Theories and their Criticisms**

**The Subsistence Theory or The Iron Law of Wages :** According to the Physiocrats who propounded this theory in the 18th century, the wage, that is, the remuneration of labour is determined by the minimum subsistence expenses necessary for the support and maintenance of the labourer and his family. They held that in order to ensure continuous supply of labour, the normal level of wages should remain at this minimum subsistence level. It should neither rise above nor fall below this level. For, if it rises above this level, early marriages will result in rapid multiplication of the number of population which, in its turn, will bring down the wages to this level, because the supply of labour will exceed the demand. Similarly, population will decline if the level of wages is below this level since the labourers will neither be able to marry nor to maintain their families. The supply of labour will fall relatively to the demand and this will push up the level of wages until it reaches again the subsistence level.

This is, in brief, the Subsistence Theory of Wages and it is evidently bound up with Malthus's doctrine of population. It is also known as the Iron or Brazen Law of Wages. Lassalle, a German economist, gave this new title to this theory because of the operation of, as it were, a natural Law resulting in the supposed absolute rigidity of wages.

**Criticism :** The Subsistence Theory, however, is no longer accepted as a right theory of wages. The reasons are, firstly, the assumption of the theory that higher wages lead to increase in the number of population is not always corroborated by the facts. The theory overlooks that the labourers may aspire after a better standard of living, and this desire for a better standard of living may serve as a deterrent to early marriages, and may thus restrain the supply of labour. A higher rate of wage, therefore, may mean a higher standard of living for the labourers and not an increase in the number of population as is apprehended.

Secondly, the theory ignores the influence of demand for labour which also is an important determinant of the rate of wages.

Thirdly, labour is an extremely heterogeneous factor and, therefore, there must be differences in the wages of different labourers of different capabilities. The theory fails to explain these differences in wages which actually exist.

The Subsistence theory, however, has one merit, viz., it points out the important fact that the wages cannot remain below a certain minimum, if the continuity in the supply of labour is to be ensured.

**The Wages-Fund Theory :** The Wages-Fund Theory is in a way an application of the Demand and Supply Theory of Value to Wages. At any given time, the theory states, there is a determinate amount of capital saved in the past to be spent in hiring labour, which constitutes the Wages-Fund. This fund constitutes the demand for labour. Similarly, there is a determinate number of population who work for hire and thus

constitutes the supply of labour. At any given time, therefore, the wages according to Mill, who first formulated this theory in a systematic way, depend upon the proportion between population, that is, only the labourers who are ready to work for hire and capital, that is, ~~the~~ part of the circulating capital which is spent in hiring labour. The average rate of wage therefore, is determined by dividing this fund by the number of labourers who work for hire.

Obviously, then, a higher rate of wage is possible only if either this fund increases or, if the supply of labour decreases. Obviously, again, the fund remaining the same, increased wages for a group of workers will only mean decreased wages for another group.

**Criticism :** Among the critics of this theory, Thornton and Jevons are noteworthy. It is for their trenchant criticisms of this theory that Mill, though he took pains to develop this theory in a most systematic way, had to discard it later. The theory, however, has received some measure of support from Cairnes, Taussig and others.

It is asked, in the first place, is it really a fact that the amount of circulating capital constitutes the demand for labour at any given time? The demand for labour, as a factor of production, we know, is a derived demand, that is, it is demanded because the product towards the production of which it is employed, is demanded. The demand for labour will, therefore, be more or less according as the demand for the product is great or small. The statement that the amount of circulating capital constitutes the demand for labour is thus misleading.

Secondly, it is true that the wages are advances made by the capitalists to the labourers and ~~at~~ any given time the amount of real wages which can be paid to the labourers is fixed by the amount of circulating capital. But the idea of a pre-determinate or fixed fund of circulating capital is unsound. For, it, *i.e.*, the amount of circulating capital varies with the attractiveness or otherwise of investment. The employers, in other

words, who advance this capital, advance a larger amount when the prospect is bright and a smaller amount when the prospect, they think, is uncertain or gloomy. It is, therefore, misleading to think that the fund is fixed. Moreover, the National Dividend is a flow and not a fund and the wages constitute only a share of the National Dividend paid as the remuneration to labour as a factor of production. The idea of a fixed fund to be spent in payment of wages is thus misleading and unscientific.

Thirdly, like the Subsistence Theory, it also fails to explain the existence of differences in wages.

Finally, the theory ignores an important factor, viz., the productivity of labour as a determinant of the rate of wages. The higher the efficiency, i.e., the productivity of labour, the larger will be the National Dividend, and the more, therefore, will be the share of labour, that is, the wages. Hence, if the productivity of labour increases, the wages may increase even if there is an increase in the number of population.

**The Marginal Productivity Theory of Wages :** The theory, in brief, may be stated thus : Continuous expansion of output, we have seen, by continuous increase in the employment of the factors of production, does not maximise the profits. There is a point, the optimum point, up to which it pays an employer to expand his output. An employer, therefore, will continue to employ more and more units of each factor of production so long as the net products yielded by them are more than the price he has to pay for employing them and in case of each factor, will stop at the point,—*the margin*—at which the price he has to pay is equal to the value of the net product. In employing labour, therefore, he will go on employing more and more units of labour as long as its net product is greater than the price, that is, the wage, he pays for it, and cease to employ any more unit, when this net product is just equal to the wage he has to pay for it. The last labourer he employs is the marginal labourer and the net product obtained by employing him is



the marginal net product. The employers will decrease or increase the number of labourers they employ, according as the actual rate of wage they have to pay is higher or lower than this marginal net product and since all the units of labour employed are assumed to be equally efficient, all will receive the wage which is paid to the marginal labourer.

**Criticism :** The theory states that the employer will continue to employ more and more units of labour so long as the wages paid are less than the value of the product of labour. Evidently, the responsiveness of the worker to particular wage is not taken into consideration. The theory is concerned, therefore, with the demand side of the problem and overlooks the influences which act on the supply side. Higher wages may be demanded by workers with higher standard of living. Wages, therefore, not only should be equal to the value of the marginal net product of labour, but should also enable the workers to maintain their existing standard of living or else, their efficiency will decline resulting in a fall in the marginal net product also.

Secondly, it is asked, is it possible to vary the employment of labour by one unit as is implied in the theory, assuming fixity in the supply of the other co-operating factors? We have already seen while discussing the limitations of the marginal productivity theory of distribution, that the amount of different factors to be combined in production is determined by the technical co-efficients of production. Variation in the use of one factor without a corresponding variation in the use of the other co-operating factors is unlikely to yield more output. And it is well-nigh impossible to disentangle the contribution of each of the factors when they are used in conjunction with others.<sup>1</sup>

<sup>1</sup> To avoid this difficulty, Mrs. Robinson has drawn a distinction between the marginal gross productivity and the marginal net productivity of labour. The increment of the value of the output caused by employing an additional man, with appropriate addition to other factors is, says she the marginal gross productivity of labour. And the marginal net productivity is the

Finally, the theory assumes that labour is a homogeneous factor and also that there exists a perfect competition in labour market. But neither of these assumptions is real. For, neither is labour a homogeneous factor, nor is competition in labour market perfect. In actual life, the marginal net product of labour does not determine the wage and there exists the discrepancy which the theory fails to explain.

**Taussig's Discounted Marginal Productivity Theory :** In brief, Taussig's Theory of Discounted Marginal Productivity may be stated thus : Production takes time. The capitalist employers who employ labourers do not obtain the proceeds of the sale of labourers' marginal product immediately. There is thus an interval of time between the payment of wages to the labourers by these capitalist employers and their getting the sale proceeds of the marginal product of labour ultimately. Meanwhile, that is, during this interval, these capitalist employers give advances to the labourers to support themselves. These advances are wages. But wages, that is, these advances made by the capitalist employers to the labourers cannot obviously, be equal to the value of the marginal product of labour. For, they cannot give away the full amount of the value of the output to the labourers. From the future value of the final output these employers, therefore, deduct a certain percentage because of the advances they make and whatever remains is paid to labour. This discounting from the value of the final product is made at the current rate of interest. Wages, therefore, according to Taussig, tend to equal the *discounted marginal product of labour*.

**Criticism :** The theory which Taussig himself admits to be 'abstract' also suffers from the defect of circular reasoning. For, it suggests that the discounting will take place at the current rate of interest. It is, therefore, assumed that the rate of interest is known already. But, according to Taussig

net increment of value of output caused by employing an additional labourer.

Marginal net product, therefore, is equal to the marginal gross productivity minus the addition to the cost of the other factors.

the rate of interest itself depends on the excess of what the labourers will produce in future over what the capitalist employers give them as advances in the present. The rate of interest, therefore, is determined by the process of advances made by the capitalist employers to the labourers. Obviously, then, when we assume that the rate of interest is known to us, we assume that the rate of wages is also known to us! Taussig's Discounted Marginal Productivity theory, suggesting as it does, that the wages are determined by discounting the future marginal net product of labour at the current rate of interest is vitiated by the fallacy of circular reasoning.<sup>1</sup>

Secondly, the influences which operate on the supply side of labour are ignored by this Discounted Marginal Net Productivity Theory of Taussig, for, in determining the marginal net product of labour it makes the unreal assumption of fixity in the supply of labour. It is, therefore, said that this theory is much the same as the Residual Claimant Theory of Walker,<sup>2</sup> which postulates that the labour is the Residual Claimant of what remains after deductions are made from the total product on account of rent, interest and profit.

Finally, Prof. Taussig has assumed that the period of production is constant. This implies that any increase in the amount of labour will necessitate an increase in the circulating capital (the other factors may, however, remain constant). The additional cost due to increased amount of circulating capital will, therefore, also be deducted from the marginal net

<sup>1</sup> To avoid this circular reasoning, Taussig has, however, suggested that the rate of interest can be determined by the rate of time preference, or, purely from the considerations of the supply of capital.

<sup>2</sup> Briefly, the Residual Claimant Theory of Walker states that the worker is the 'residual claimant' of what remains after deductions are made from the total product on account of rent, interest and profit. It is, therefore, implied in the theory that wages are the rewards of labour and therefore, the share of labour can be more only if by greater efficiency they can produce more. The theory, however, does not take into account the influences operating on the supply side of labour nor does it pay attention to the possibility of Trade Unions, by their collective bargaining power, influencing the wages.

product. But, as has been observed by Prof. Hicks, there is no reason to suppose that the period of production is constant. The period, instead, may be shorter if more labour be employed with the same amount of circulating capital. Obviously, then, since no extra circulating capital has been necessary, the additional product need not be discounted. Mr. Hicks, therefore, holds that Taussig's Discounted Marginal Productivity Theory can be accepted as valid if we assume that the period of production is variable and not constant as has been assumed by him.

**Why there are Differences in the Rates of Wages ?**  
There exist differences in the wages in different occupations mainly because, the nature of these occupations, the type of training they require, and the risk they entail greatly differ. The reasons for these differences in the wages in different occupations, in brief, are discussed in the following paragraphs :

In the first place, all occupations are not equally pleasant. Some are more pleasant and less risky, while others are less pleasant and more risky. Wages, therefore, are low in the former occupations and high in the latter. In other words, wages will be high or low according as the work is disagreeable and risky, or pleasant and involves less risk.

Secondly, wages also differ because of the differences in the social esteem in which the different occupations are held. Higher wages have to be paid in those occupations which are considered to be less dignified or respectable, while if they are regarded as respectable and dignified, the workers may agree to work at lower wages.

Thirdly, the rate of wages depends on the regularity or otherwise of the employment. That is, higher wages are necessary to induce workers to work if the work is temporary, while the workers may agree to work for lower wages if the employment is permanent.

Fourthly, the rate of wages depends also on the expenses of the training which is necessary for a particular occupation,

and the length of the time required for such training. The higher the expenses and longer the period required for such training, the higher will be the rate of wages and the lower the expenses and shorter the period, the lower will be the rate of wages.

Fifthly, security, the prospects of promotion, etc., also govern the rate of wages. That is, if there is security and prospect of promotion, the workers may agree to a modest start in the hope of future higher rewards.

Sixthly, ignorance of the workers and their immobility are also causes of the differences in wages. Two workers, for instance, who are equally capable, may earn different incomes. One may earn a higher income because of his knowledge of the actual state of affairs in different occupations, that is, their respective advantages and disadvantages, both monetary and non-monetary, whereas the other, without any such knowledge, accepts any job he gets even if the wage is less. Similarly, a worker may prefer to work and earn less in his home town than to go to a distant place where he can earn more. Again, having spent a few years in one occupation one may not like to try in other occupations where there is the prospect of higher incomes. Immobility, that is to say, may also be due to, what is said to be 'specificity.'

Finally, existence of what are called by economists the *non-competing* groups amongst the workers, is also a reason which explains the existence of differences in their wages. The workers, that is to say, may be grouped into several categories who do not compete with one another. For instance, there are some who are intellectual workers, while there are others, who are manual labourers but skilled, and there are others still, who are manual labourers but unskilled, etc. Neither of these groups of workers compete with any other. Broadly speaking, these *non-competing* groups may be categorised thus: the unskilled workers, the skilled workers, the intellectual workers whose work is only routine work, *e.g.*, the work of a clerk, and

finally, those whose work requires supreme ability and intellect, *e.g.*, the lawyers, physicians, etc. These workers are said to be *non-competing*, because the workers in one category do not compete with those of another and naturally, therefore, the supply in one category of workers does not affect that of any other category. The wages of the workers in each of these groups, therefore, are determined separately, according to the forces of supply and demand of labour.

**Imperfections of the Labour Market and Exploitation :** Imperfections of the labour market and the weak bargaining power of labour give rise to what is known as exploitation of labour.<sup>1</sup>

Labour, we have seen, is an extremely perishable thing. The workers, therefore, are at a disadvantageous position. There are several reasons for the weak bargaining power of the labourers. These are, firstly, the period for which they are out of employment is lost to them for ever and they, therefore, cannot withhold their services for a long period. This ability to hold out for a wage depends upon their past savings which are never so large as they can draw upon for a long period. Secondly, they are often ignorant of the value of their own services to the employers. Thirdly, ignorance and immobility of the labourers are also responsible for the unequal wages they are paid by the different employers at different places or in different occupations. Immobility, not infrequently compels the workers to accept low wages. The reasons of immobility may be 'specificity,' higher cost of moving from one place to another, etc.

When, however, there is competition in the labour market and the workers who believe that they are underpaid, may secure employment elsewhere at a 'fair wage', the chances for exploitation for a long period will be less. Nevertheless, it

<sup>1</sup> By exploitation is meant that the labourers are paid by the employers less than the full value of their net marginal product.

is true, that these imperfections of the labour market give rise to the exploitation of the labourers.

**Trade Unions and Wages :** A trade union is an association of the wage earners formed with the objects of safeguarding and promoting the economic interest of the workers. The primary economic functions of a trade union thus are to prevent by its power of collective bargaining the exploitation of labour and to secure higher wages, shorter hours of work, better factory conditions and amenities etc.<sup>1</sup>

Now, is it always possible for a trade union, by its power of collective bargaining, to secure higher wages for the labourers? It depends on various other conditions. It is true that the employers are likely to give more consideration to the demand of the unions than they would to the demand of any single worker. But there are limitations to the powers of a trade union also. For instance, no trade union can wield much power unless it includes most of the workers in that occupation. Secondly, the possibility of employing the 'black legs' from adjacent districts by the employers also limits the chances of success of a union. Thirdly, a trade union has also to see that the workers are not 'starved into submission'. It is, therefore, necessary that a trade union should have adequate funds. Without sufficient funds no trade union can continue to fight with the employers for long, for, during the period of strike, which is the main weapon of a trade union, it has to support the workers and also their families. Again, a higher wage, if it is secured by a trade union, may mean increased unemployment. For, many workers may not be absorbed by the employers. It is, therefore, necessary to examine, which one is lesser evil, that is, the unemployment or the exploitation? A trade union, again, cannot secure higher wages for the labourers

<sup>1</sup> Often a trade union may have what is said to be militant object, e.g., overthrowing the capitalistic system of government by direct action. But more often it is a ministrant organisation, that is, a benefit organisation, formed with such objects as supporting the workers when they are unemployed, or providing sickness benefits, etc.

if there is chance of influx of new workers who will depress the wages. It may, however, succeed if it can restrict the number of new entrants. In other words, by restricting the supply of labour it can succeed in raising the wages of the labourers. But such restriction of membership by a trade-union in a highly paid trade implies a denial of opportunity to other workers: And monopoly wage levels cannot be justified any more than monopoly commodity prices.<sup>1</sup>

When, then, can a trade union secure a higher wage for the workers? A trade union can secure higher wages, firstly, when the cost of labour constitutes only a small proportion of the total cost of the product. Secondly, if it is difficult for the employers to economise the cost of labour by using alternative methods of production. But the chances are there that an employer will take to the device of installing more labour-saving machinery. They will, that is to say, substitute capital for labour.<sup>2</sup> And the, "rate at which substitution proceeds—the rate at which the proportion of the two factors changes as their relative price changes—is called the elasticity of substitution; and the elasticity of substitution is the first damper on wages."<sup>3</sup>

Finally, the demand for the product which the workers produce is also an important factor. A trade union can secure higher wages if the demand for the product is inelastic.

<sup>1</sup> Another way of restricting the supply of labour i.e., of new entrants, is to adopt a 'go-slow' policy. That is, the workers perform less work than before per hour. Such a policy will 'spread' the available work and the unemployed members will be thus absorbed. But against this advantage has to be considered the consequent rise in the cost of that type of labour which may, in its turn reduce the demand for it. Again, when followed by most workers, this policy would lead to reduction in the total output and a rise in the price also. "Thus a union which succeeded in creating more employment for its members, at a given money wage, would have to set against this gain the rise in the cost of living due to the widespread adoption of its own 'go-slow policy'."—(Benham—Economics, p. 293.).

<sup>2</sup> The employer may also replace labour by labour, that is, by giving employment to the 'black-legs'.

<sup>3</sup> Cairncross—Introduction to Economics, p. 248.



## CHAPTER 23

### INTEREST

**What is interest ?** Interest is the price of a loan expressed as an annual rate, calculated on the principal of the loan. When, for instance, you want to borrow a sum, say, of Rs. 100, with the promise to repay a year after, the lender may ask you to pay back instead of the sum of rupees 100, Rs. 105, that is, charging an interest on the sum borrowed by you at the rate of 5 p. c. per annum. Interest thus is the price which the borrower pays for the use of the loan-capital from the lender.

**Pure or Net Interest and Gross Interest :** By pure or net rate of interest is meant simply the earnings of capital or the reward of waiting, when lending involves no risk, either of loss or of default. It is, however, possible that lending may, and in fact, often does, involve certain risks. These risks, as says Marshall, may be either '*trade risks*', that is, which may arise from unexpected changes in the fashion and, therefore, in the demand for a thing before production is over, from new inventions, fluctuations in the prices of raw materials, etc., or '*Personal risks*', that is, which arise from, say, the dishonesty of the borrower, his inability to pay etc. It is, therefore, but natural that the lender will charge a higher rate of interest as an insurance against these risks and also to cover the cost he may have to incur for management of such loan transactions. When the rate of interest which the lender charges includes, besides the payment which the borrower makes for the use of the loan-capital, these charges, that is, which are made for insurance against these risks, *trade* and *personal*, and also the earnings of management of the lender, it is said to be the gross rate of interest.

Obviously, then, the greater the amount of these risks and inconveniences and the cost of management, the higher will be the rate of gross interest which the lender will charge to recompense him for these risks. And the gross rate of in-

terest, therefore, can never tend to be equal throughout a country. But the net or the pure rate of interest, that is, the earnings of capital when lending involves no risks, has a tendency to be equal throughout a country. This is so because, the forces of competition will operate until a single rate of interest is settled for the whole country.

**Bank Discount, Nominal rate of interest and the Real rate of Interest :** When the bank discount is, 10 p. c. what it actually does is, instead of charging interest as a separate item, it gives you an advance of Rs. 90 now against your promise to pay Rs. 100 a year hence. In fact, for an advance of the sum of Rs. 90 you pay Rs. 10. The actual rate of interest is not, therefore, 10 p. c. as it appears to be, but more than that ; it is a little over 11 p. c. This practice of bank discount often, therefore, leads to confusion as to the actual rate of interest.

Similarly, a bank may declare its rate of interest to be, say, 5 p. c. But when a borrower wants to borrow a sum of Rs. 5,000, it may want him to borrow Rs. 10,000, at, of course, 5 p. c. but it may ask him to keep a sum of Rs. 5,000 out of Rs. 10,000 as deposit in the bank. The borrower thus uses only the sum of Rs. 5,000, whereas he pays interest on Rs. 10,000, which simply means that the real rate on the money he uses is not 5 p. c. but 10 p. c.<sup>1</sup>

**Why Interest is paid ?** The obvious reason why a price is paid for the hire of loan-capital is that there is a scarcity of

<sup>1</sup> Similar confusion exists when payments, for the things bought, are made in instalments. Supposing you buy a sewing machine worth Rs. 240, and the understanding with the dealer is that you will pay, say, the sum of Rs. 22 each month, for a year, that is, you will pay Rs. 264. In other words, you pay an excess of Rs. 24 (Rs. 264 — Rs. 240 = Rs. 24) because, as it may appear, the dealer charges from you an interest at the rate of 10 p. c. But actually only in the month in which you are buying the machine you are borrowing Rs. 240 for which you are paying an interest at the rate of 10 p. c. But this amount is gradually reduced in each subsequent month i.e., after payment of each instalment and, therefore, the actual rate of interest which you pay continues to rise in each subsequent month.

such loan-capital relatively to its demand. There are several reasons for this scarcity of the loan-capital. In brief, these are, firstly, we can lend provided we have ability to save. But our ability to save is limited. The supply of loanable fund, therefore, is also limited. Secondly, the amount we save may be utilised by us, that is, we may spend the amount and buy goods for ourselves. While, therefore, we lend we deny ourselves this opportunity of using our own money. Interest is a payment made as a reward for this denial. Thirdly, to lend means to make the liquid purchasing power illiquid and thus to suffer the inconveniences this illiquidity involves. To recompense these inconveniences interest has to be paid.

### **Determination of the Rate of Interest : Different Theories**

**The Productivity Theory of Interest :** Other things remaining the same, production without the use of capital, i.e., machines, plants, etc., will be much smaller in volume than production with the use of machines, plants etc., that is, capital. Increased use of capital, therefore, results in increased volume of production. Capital, therefore, is said to be productive, and the Productivity Theory of Interest states that the interest is a price which the borrower pays to the lender for the productive services of capital which help him to produce more.

Like the other factors of production capital is also subject to diminishing marginal productivity. That is, its increased supply will diminish its productivity. Each fresh extension of the period of production by the use of additional units of capital will result in a diminishing increment in the output. With a view to maximise profit an entrepreneur will expand his output with the use of additional units of capital until the additional output resulting from the employment of a unit is just equal to the price, that is, the interest, he has to pay for it. The marginal productivity of one unit of capital thus will determine the rate of interest.

This is, in brief, the productivity theory of interest. Among those who propounded this theory, are Say, Carey and others.

**Criticism :** Capital, it is said, may be borrowed both for the purposes of consumption and production. The theory is applicable only when it is assumed that capital is borrowed for productive purposes and not when it is borrowed for purposes of consumption.

Secondly, when it is said that production with the use of capital is more than production without the use of capital, naturally, what we have in mind is production of more goods and not necessarily production of more value. It is, therefore, misleading to say that capital produces more value. To say that capital produces more value is to fall a victim to fallacious reasonings simply because the present value of capital goods depends upon the value of the income they will yield in future and the way by which we can determine it, i.e., the present value of capital goods, is by discounting their future incomes. But how can we discount unless we assume a certain rate of interest? Let us take an illustration: Suppose that a machine worth Rs. 10,000 yields an annual income of Rs. 1,000. From this annual income of Rs. 1,000, yielded by the machine it is possible to determine the price of the machine only if we capitalize this income at 10 per cent interest. But the paradox is that we have already assumed that the rate of interest is 10 per cent when from the annual income of Rs. 1,000, the price of the machine is calculated to be Rs. 10,000. That is to say, we have assumed what we wanted to determine.

It is, therefore, misleading to say that capital is productive of more value. The correct way to say is that capital produces goods and it is the value of these goods which determines the capital value. It is not the capital invested in an orchard that gives value to it. For, the orchard may not have any value if it does not produce anything. It is the goods, that is, the fruits produced by capital that have value and the

capital value of the orchard will be determined by the annual production of these fruits.

We, however, may not reject the theory summarily. For, it is true that the demand for the loanable fund does depend on what it will yield. The marginal productivity of capital, therefore, does affect the demand for capital and, therefore, also the rate of interest.

**Abstinence Theory :** Capital goods are produced because the people save. But present consumption is always more enjoyable than deferred consumption. Saving or abstinence, that is, postponing consumption now, therefore, involves sacrifice to compensate which the interest has to be paid.<sup>1</sup> Senior, Cairnes, and others are the propounders of this theory.

The rate of interest will depend on the demand for capital and the aggregate amount of saving or 'waiting.' It will continue to rise so long as the demand is in excess of the supply and finally settle at that rate when the supply will be equal to the demand, that is, when induced by the higher rate of interest the marginal savers will contribute their shares.

**Criticism :** The Abstinence Theory maintains that the supply of capital depends upon the abstinence exercised by the savers of capital. This theory, thus, takes into account the supply side of loanable funds giving rise to interest but ignores the demand side. Secondly, although, it endeavours to explain why saving is scarce, it does not throw any light on how the rate is actually determined.

**The Austrian Theory of Interest :** The loan, according to Bohm-Bawerk, the leader of the Austrian School, who developed this theory, is a real exchange of present goods against future goods. And the present goods possess a greater value than the future goods of the same number and kind. A definite sum of present goods, therefore, can only be purchased by a lar-

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<sup>1</sup> It has been pointed out that savings do not necessarily involve 'sacrifice.' Saving for a millionaire, for instance, obviously does not involve suffering. Marshall, therefore, suggests the use of the word 'waiting' for 'abstinence'.

ger sum of future goods. Present goods, therefore, possess an 'agio' over the future goods. This 'agio' or the premium is the interest.

The present goods, thus, are said to possess an agio over the future goods. That is, in other words, the future goods are always less valuable than the present goods. This is so, firstly, because the future is less clearly perceived than the present, which in the words of Bohm Bawerk, means the 'perspective under-estimate of the future.' Secondly, the demand for the present goods is greater than the demand for the future goods because the present wants are felt more keenly. Present goods are, therefore, scarce relatively to their demand. This relative scarcity of the present goods as compared with the future goods is another reason why they possess an 'agio' over the future goods. Thirdly, it is held that the indirect or the round-about process of production is more remunerative. The more round-about is the process of production, the greater is likely to be the output. The present goods, therefore, possess what is called a 'technical superiority' over the future goods because of greater productiveness of the round-about or lengthy process of production. And interest, according to this theory, is the reward which has to be paid if future goods are to be exchanged with present goods.

**Criticism :** There is some truth in Bawerk's argument that we, generally speaking, prefer present consumption more than we do future consumption. Savers, that is, those who forego present consumption must, therefore, be paid something in future in excess over the amount they forego consuming now. This excess is the interest. But, it is asked, does saving really require an inducement or a reward? In the opinion of Keynes, for instance, saving represents an involuntary act. People save when their level of income and the standard of living permit them to save. Hence, saving, according to him, does not require any reward or inducement.

Secondly, present goods possess 'technical superiority' over

the future goods because, it is said, the longer the average period of production, the greater will be the productiveness. But this argument is misleading, because, in the first place, the productive period depends on the nature of the article and on technical considerations. Secondly, continuous lengthening of the process of production, that is, making it more and more round-about, is not likely to result in continuous increase in the volume of output. Every fresh extension of the period of production will yield a diminishing increment of the product. There is, as we know, an optimum point, extension beyond which will mean loss.

Finally, as observes Fisher, the idea of greater productivity of the lengthier process is much similar to the idea of the productivity theory which Bawerk himself criticised. Besides, the rate of interest is not determined by the 'technical superiority' of the present goods taken singly. Instead, it influences the rate of interest in the sense that it works out its effect through the other two factors, namely, (1) the perspective under-estimate of the future and (2) the relative scarcity of the present goods as compared with the future goods which are the reasons for which people have more preference for present consumption than for future consumption.

**Prof. Fisher's View : Time-Preference and Interest :** By Time-Preference is meant the preference to have an equal amount of goods and services at one time rather than at some other time. An individual is impatient to obtain immediate satisfaction by spending his income. He has, that is to say, a preference for the present income and satisfaction over the income and satisfaction of an equal amount and certainty in future. This is what is called by Prof. Fisher, the Time-preference.<sup>1</sup> The rate of interest which induces an individual to

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<sup>1</sup> People are said to have a *positive* rate of time-preference when they prefer to have an equal amount of goods and services in the present rather than in future or prefer to have such goods in the near future rather than in the distant future. When, however, some prefer to have an equal amount of goods in the future rather than in the present, they are said to have a *negative* rate of time-preference.

forego present consumption, thus expresses a price in the exchange between the present goods and the future goods.

An individual's time-preference, according to Fisher, depends upon the following factors :

1. *The size of his income* : The higher the income of an individual, the lower will be the rate at which he will discount the future. Similarly, the lower the income, the greater will be his preference for the present income over the future income. The time-preference will, therefore, be more when the income is low. This is so because provision for the present is considered more important.

2. *The Distribution of the income in time* : When the income is likely to increase in future—the preference for present income, which is scarce, will be high and the rate of discount will be high. When, however, the income is likely to fall in future, the preference for the present income, which is relatively abundant, will be lower while that for the future income (relatively scarce) will be higher and the rate of discount will be low.

3. *The Composition of the income* : An individual's income consists of the different sets of goods and services it buys. The diminution of any one constituent of the income, that is, of any one set of goods and services, would have a similar effect on his rate of time-preference as a decline in the income.

4. *The probability of the income* : This implies the certainty or otherwise of earning income in future. The presence of risk or uncertainty about future income affects individual's time-preference. The rate of time-preference will be high or low according as the degree of the risk or uncertainty of future income is great or small.

5. *Individual characteristics* : The time-preference of an individual depends also on the characteristics of an individual, that is, the time-preference of different individuals will be different because of their different personal characteristics, *e.g.*, their foresight, self-control, habits etc.



6. *Expectancy of Life* : That is, if an individual thinks that he will not live long, it is likely that he will prefer to have his purchasing power now rather than to defer the use of it for future. (The desire to make provision for dependants, may, however, offset this tendency).

Finally, it may also be noted that the time-preference of an individual for the present purchasing power will be higher, when the amount which he may be lending is more. That is, the larger the amount of the loan in proportion to his total income, the greater the sacrifice of the present liquidity and, therefore, the greater the marginal utility of the present goods whose purchase he must forego in order to make the loan. It, therefore, follows naturally that the larger the amount of the loan, the higher will be rate of interest which the individual will charge in order to compensate his increasing time-preference. The rates of time-preference of individuals have thus a tendency to become equal to the rate of interest. This is so because given a market rate of interest an individual will borrow or lend, according as his rate of time-preference is higher or lower than the market rate until his rate of time-preference becomes equal to the market rate of interest.

Fisher's theory is an improvement upon Bohm Bawerk's in that it avoids the confusing concept of the 'technical superiority' of the present goods over the future goods and holds that it is the time-preference which determines the interest and an individual's time-preference is determined by the rate which will overcome his impatience to spend income. But it does not explain how the rate of interest is determined.

**The neo-classical Theory of Interest :** The rate of interest, according to this theory, is determined by the total forces of demand for and supply of capital. When the demand for capital is more relatively to its supply, the rate of interest will rise and if the increase in the demand persists, then the rate of interest will also continue to rise until at a certain rate the marginal savers are induced to save and thus swell the amount

of the loanable fund to be made available to those who want to borrow, that is, make the supply of capital equal to its demand. The function of the rate of interest thus is to bring the demand for and the supply of capital into equilibrium.

Now, the demand for capital obviously depends on the profitableness of investment. Producers with a view to maximise their profit will invest additional units of capital and expand their output as long as the value of the product is greater than the cost, including the interest, and cease to expand when the falling price (which will result from the increase in the output) is equal to all costs, including the interest. In other words, they will cease expanding when the value of the marginal product is equal to the marginal cost, including the interest.

Capital, however, is not always demanded for productive purposes. It may be demanded for consumption purposes also. So the total demand for capital is the aggregate of the demand of all producers for productive purposes and of all those who demand for consumption.

The supply of capital depends on various factors. For instance, it depends on the habits and customs of the people, their family affection, security of life and property, opportunities of safe investment, the rate of interest etc. It is, therefore, possible that some rich people will save when the rate of interest is zero or even when it is negative. Family affection, idea of future security, etc., also may prompt men to save regardless of the inducement of the rate of interest. But the aggregate of these savings is likely to be much insufficient to the aggregate demand for it. The total demand, therefore, cannot be satisfied until the volume of savings increases. And the rate of interest will continue to rise until it becomes sufficiently high to induce the marginal savers to contribute their savings to swell the volume of savings and make it equal to the aggregate demand.<sup>1</sup>

The supply of loanable funds will, therefore, increase or

<sup>1</sup> It is to be noted that the banking system also supplies loanable fund.

decrease according as the rate of interest rises or falls and the demand for loanable funds will increase or decrease according as the rate of interest is lower or higher. The function of the rate of interest is to bring the demand for and the supply of loanable funds into equilibrium and the rate at which these two are equated is the equilibrium rate of interest. Since interest is the price which is paid for the use of capital in any market, it "tends towards such a level that the aggregate demand for capital in that market at that rate of interest, is equal to the aggregate stock forthcoming there at that rate." In the table given below it is shown that as the rate of interest rises the supply of loanable funds increases while the demand for it falls and the supply and demand are equal when the rate of interest is fixed at 4 per cent. This is, therefore, the equilibrium rate.

<i>Demand for loanable funds</i>		<i>Rate of Interest</i>	<i>Supply of loanable funds</i>
Rs.	30,000	2 p. c.	Rs. 15,000
,,	25,000	3 p. c.	,, 18,000
,,	20,000	4 p. c.	,, 20,000
,,	15,000	5 p. c.	,, 25,000

**Criticism :** According to this theory, more capital will be forthcoming if the rate of interest is high because the high rate will induce people to save more. And the function of the rate of interest, it is said, is to bring into equilibrium the demand for and the supply of capital. But, it is asked, does the volume of saving necessarily depend upon the rate of interest? Keynes, for instance, has pointed out that a man may hoard the money he saves and thus may not earn any interest. Such hoardings, naturally do not affect the supply of capital. Savings, according to Keynes, depend upon two factors, namely, (1) the community's level of money income and (2) the marginal propensity to consume. And the rate of interest at any time, according to Keynes, being the reward for parting with

liquidity, "is a measure of the unwillingness of those who possess money to part with their liquid control over it."<sup>1</sup>

Secondly, it is pointed out that the neo-classical theory holds good only when it is assumed that the community's money income is constant. Granting even that the rate of interest does, in fact, exercise some influence on the marginal savers, the theory errs while it makes the assumption of constant money income. To take an illustration: A higher rate of interest obviously will act as a damper on investment; it will diminish the demand for loanable funds. A decline in investment results in a decline in the community's income, and, therefore, also in the volume of savings. Granting, therefore, that out of a given income more will be saved when the rate of interest is high, ultimately, as is seen, the volume of total savings will decline since the high rate of interest will lead to a decline in investment and, therefore, in the total volume of community's income. The assumption of constant money income, thus is unsound and vitiates the theory.

**Liquidity-preference Theory of Keynes:** The rate of interest, according to Keynes, cannot be a return to saving or waiting as such.<sup>2</sup> For, a man may hoard his savings and thus may not earn any interest, although he saves just as much as before. Nor is the notion that the rate of interest is the factor which brings into equilibrium the demand for savings (in the shape of new investment forthcoming at a given rate of interest) and the supply of savings (which results at that rate of interest from the community's psychological propensity to

<sup>1</sup> Keynes—General Theory, p. 167.

<sup>2</sup> "...whilst there are forces causing the rate of investment to rise or fall so as to keep the marginal efficiency of capital equal to the rate of interest, yet the marginal efficiency of capital is, in itself, a different thing from the ruling rate of interest. The schedule of the marginal efficiency of capital may be said to govern the terms on which loanable funds are demanded for the purpose of new investment; whilst the rate of interest governs the terms on which funds are being currently supplied."—General Theory, p. 165.

save) acceptable since, it is "impossible to deduce the rate of interest merely from a knowledge of these two factors."<sup>1</sup>

"The rate of interest" says Keynes, "is not the "price" which brings into equilibrium the demand for resources to invest with the readiness to abstain from present consumption."<sup>2</sup> It is just the reward for parting with the liquidity of money for a specified period of time. It is, therefore, "nothing more than the inverse proportion between a sum of money and what can be obtained for parting with control over the money in exchange for a debt for a stated period of time."<sup>3</sup>

It, therefore, follows that the rate of interest is a "measure of the unwillingness of those who possess money to part with their liquid control over it." "It is the 'price' which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash ;—which implies that if the rate of interest were lower, *i.e.*, if the reward for parting with cash were diminished, the aggregate amount of cash which the public would wish to hold would exceed the available supply, and that if the rate of interest were raised, there would be a surplus of cash which no one would be willing to hold."<sup>4</sup>

Now, on what does this liquidity-preference depend ? The psychological time-preferences of an individual, in the words of Keynes, require two distinct sets of decisions to carry them out completely. The first is concerned with that aspect of time-preference which he calls the *propensity to consume*, which determines for each individual how much of his income he will consume and how much he will reserve in some form of command over future consumption. Next, the individual has to decide further, in what form he will hold the command over future consumption which he has reserved; that is, whether he desires to hold it in the form of immediate, liquid command

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<sup>1</sup> Keynes—General Theory, p. 165.

<sup>2</sup> Ibid—p. 166.

<sup>3</sup> Ibid—p. 167.

<sup>4</sup> Ibid—p. 16

(i.e. in the form of money or its equivalent) ? Or, whether he is willing to part with the immediate command for a specified or indefinite period ? That is, in other words, what is the degree of an individual's preference for holding command over future consumption in the form of immediate liquid command over holding it in the form of deferred command, that is, what is the degree of an individual's liquidity-preference ?<sup>1</sup>

There are three motives on which this liquidity preference of an individual depends namely, (1) *the transaction motive*, that is, the need for cash for the current transaction of personal and business exchanges ; (2) *the precautionary motive*, that is, the desire for security as to the future cash equivalent of a certain proportion of total resources and (3) *the speculative motive*, that is, the object of securing profit from knowing better than the market what the future will bring forth.

Since the rate of interest is the reward for 'parting with the liquidity for a specified period' it is possible to draw up a schedule of liquidity-preference, showing the amounts of money which the people may desire to hold at different rates of interest. Since interest is the 'price' which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash, it follows that if the rate of interest were lower, the aggregate amount of cash which the people would wish to hold would exceed the available supply and, if it were raised, there would be a surplus cash which no one would be willing to hold. The "liquidity-preference" thus is a "potentiality or functional tendency, which fixes the quantity of money which the public will hold when the rate of interest is given ; so that if  $r$  is the rate of interest,  $M$  the quantity of money and  $L$  the function of liquidity-preference, we have  $M = L(r)$ . This is where, and how, the quantity of money enters into the economic

<sup>1</sup> The mistake in the accepted theories of the rate of interest in the opinion of Keynes, "lies in their attempting to derive the rate of interest from the first of these two constituents of psychological time-preference to the neglect of the second." (Keynes—General Theory, p. 1)

scheme.”<sup>1</sup> The actual rate of interest in any given circumstance is, therefore, determined by the quantity of money in conjunction with the liquidity-preference. “As a rule,” observes Keynes, “we can suppose that the schedule of liquidity-preference relating the quantity of money to the rate of interest is given by a smooth curve which shows the rate of interest falling as the quantity of money is increased.”<sup>2</sup>

**Criticism :** According to Keynes, the rate of interest is the reward for parting with liquidity and depends on the liquidity-preference and the supply of money. It is, therefore, determined independently of the marginal efficiency of capital. Since new investments, according to him, are determined by the psychology of the businessmen and the current rate of interest, the expected profitability of new investment, or the marginal efficiency of capital is dismissed by him as irrelevant. But, it is pointed out that the activities of the businessmen are influenced by the productivity of capital. The rate of interest cannot, therefore, be said to be determined independently of the marginal efficiency of capital or demand for investment funds.

Again, Keynes’ argument that the rate of interest measures only the marginal liquidity-preference and not the marginal forbearance is unwarranted. For, while a man saves, he forbears from present consumption for which he gets interest as a reward. It is, therefore, correct to hold that in the case of individuals the supply of loanable funds depends upon both the marginal liquidity preference and the marginal time-preference. In the case of bank loans, however, the only governing factor is the liquidity-preference.

<sup>1</sup> Keynes—General Theory, p. 168.

<sup>2</sup> It is, however, possible that, “circumstances can develop in which even a large increase in the quantity of money may exert a comparatively small influence on the rate of interest. For a large increase in the quantity of money may cause so much uncertainty about the future that liquidity-preferences due to the security-motive may be strengthened; whilst opinion about the future rate of interest may be so unanimous, that a small change in present rates may cause a mass movement into cash.”—(Keynes—General Theory, p. 172)

Thirdly, money, according to Keynes, is co-extensive with bank deposits. "It is often convenient in practice" says he, "to include in *money* time-deposits with banks and, occasionally, even such instruments as (*e.g.*) treasury bills. As a rule, I shall assume that money is co-extensive with bank deposits."<sup>1</sup> But his theory, he states in his discussion with Roberston, does not run in terms of demand for and supply of credit. It is, therefore, not clear as to what meaning he attaches to 'money.'

Finally, does a policy of continued monetary expansion necessarily lead to a continued decline in the rate of interest, as Keynes suggests? Not necessarily. On the other hand, such an inflationary policy may cause a mass flight from the currency. Keynes seems to lay more emphasis on monetary phenomena than on real economic forces, like demand and supply of capital.

**Can the Rate of Interest be Zero?** According to Prof. Schumpeter, interest arises because, lured by the prospects of temporary profit, the entrepreneurs demand capital. But in a static state, profits disappear and, therefore, interest in such a state would fall to zero. But this is a mistaken view. For, even in a static state there may be individuals with unequal incomes and unequal needs in successive years. And it is not unlikely that in order to maximise their total satisfaction out of their total expenditure spread out over the whole period, some may borrow and some may lend in a particular year. In a static state, there would be interest, that is, the 'implicit' interest as a result of "abstinence in the sense of refraining from accumulation."<sup>2</sup>

The fact is, that the rate of interest depends on the demand for and the supply of loanable funds, rising when the demand exceeds the supply and falling when the supply exceeds the de-

<sup>1</sup> Keynes—General Theory, p. 167n.

<sup>2</sup> Interest may be 'explicit' or 'implicit'. By *explicit* interest is meant the income which a lender obtains through a loan contract. And the income which the capital earns for the borrower is said to be the *implicit* interest.



mand. Assuming that capital accumulates at a rate faster than the rate of increase of population, the rate of interest may tend to fall if it means excess of supply of capital than the demand. But can it ever fall to zero? It is difficult to give any answer either in the affirmative or in the negative without any qualification. For, the rate of interest may be positive, zero or even negative, under different circumstances which may be envisaged. For instance, it will be positive when the demand for loanable fund is more than the supply of it; zero when the willingness of the lenders to lend at all costs is just balanced by the unwillingness of the borrowers to borrow and negative, when the supply of loanable fund exceeds the demand for it. A millionaire, for instance, may decide to deposit money on current account and instead of getting any interest on it, may agree to bear the 'bank charges' which simply means that he lends at a negative rate of interest.

But since our wants are unlimited there will always be scope for profitable employment of capital for productive purposes for the satisfaction of our wants. There will, therefore, always be demand for capital. The rate of interest may fall to zero only when the borrowers cease to demand loanable fund because the marginal net product of capital is conceived to be nil. But that is unlikely to ever occur. It is equally unlikely that the lender would lend, generally speaking, without any expectation of reward, leading thus to zero rate of interest. There is, therefore, hardly any likelihood of the rate of interest falling ever to zero.

### **Why there are Differences in the Rates of Interest?**

Under perfect competition, we have observed before, the rate of interest, that is, the pure rate of interest, has a tendency to be equal throughout a country. In actual life, however, we notice that different rates of interest are charged on loans of different kinds. Why such differences in the rates of interest exist? There are several reasons for these differences in the rates of interest. In the first place, the differences in

the rates of interest exist because the periods of time for which loans are given differ. The longer the period of the loan, the less liquid it will be and, therefore, the higher will be the rate of interest which will be charged on such loan. Secondly, the rates of interest differ because all borrowers cannot offer equally good securities against the loans they require. The rate of interest will obviously be higher when there is the risk of default and lower when there is no such risk. Thirdly, differences in the rates of interest exist because of the imperfections of the capital market. The capital market is made up of various sub-markets each of which specialises in different kinds of loans and none, therefore, is in competition with the other. For instance, the joint stock banks advance loans to one kind of borrower whereas the building societies cater for another category of borrower. Again, the insurance companies cater for one kind of lender while the investment trusts cater for another. The market for short term loans, again, is cut off from the market for long term loans. "Thus the borrowers and lenders, attached by habit or by ignorance to one sub-market, may raise or make loans on terms less favourable than the rates ruling in other sub-markets."<sup>1</sup> Fourthly, the market imperfections will be greater when there exist geographical obstacles to competition. That is, the borrowers may pay higher rate of interest because they are unknown to the lenders outside their country and, therefore, have access to only local capital market. Finally, the differences in the rates of interest payable on large or small loans may also be due to the differences in marketability. For instance, a company may have to pay a high rate of interest when it decides to make a small issue of bonds. This is so, firstly, because trading in these bonds will be restricted, and hence, for the lenders it will mean greater difficulty in disposing of these bonds in order to recover their money if they so desire and, secondly, the value of these bonds when the market is narrow, will tend to fluctuate more abruptly.

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<sup>1</sup> Cairncross—Introduction to Economics, p. 260.

**The Justification of Interest :** Is there any justification of earning money by lending it? In ancient times, philosophers like Aristotle condemned interest as usuary. These philosophers looked at the phenomenon of interest from ethical point of view and no wonder, therefore, that it was believed that to obtain interest by lending money, was to make an unnatural use of money, interest being the 'unnatural' offspring of a barren metal. But these ideas have undergone changes since then. And from purely economic stand point there are reasons to justify interest.

We may look upon interest both as a 'price' and as a source of income as well. Regarded as a price interest does perform a useful social function, *viz.*, it rations out savings, the supply of which is relatively scarce, among competing borrowers. Even in a socialist community it is necessary to determine the priority of the schemes calling for use of capital which is scarce and to eliminate those schemes from which the expected returns are small and hence, interest can perform this useful function of rationing out the limited supply of capital between competing claims. For, if the "return could be measured in money terms, the charging of a rate of interest would automatically secure this result, since it would give priority to schemes offering prospects of a higher return, and weed out schemes of lesser productivity. The rate of interest would be fixed just low enough to attract claimants for the total supply of savings." <sup>1</sup>

It is, however, difficult to justify interest if it is regarded as a source of income. For, interest is earned by those who happen to own capital. It, therefore, implies that if we justify payment of interest, we also justify existence of inequalities of ownership of capital. Those who defend capitalism (of which differences in ownership are an integral part) argue that the prospect of unequal gains and enjoyment of property rights are the greatest inducements which inspire men to pro-

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<sup>1</sup> A. C. Cross—Introduction to Economics, p. 257.

ductive activities and, therefore, provide incentives to the accumulation of capital and thus lead to progress. Nevertheless, none possibly would deny that "where inequality is the fruit, not of effort, but of inheritance, fraud or luck, it is unjustifiable and ought to be diminished by such expedients (*e.g.*, Estate Duties) as leave the fundamental institutions of capitalism undisturbed."<sup>1</sup> And we may justify payment of interest if it can be shown that capital would cease to accumulate or cease to be lent without the inducement of interest. It is possible that when the rate is very low the capitalists may choose to consume a part of their savings. The capital consumption, however, is likely to be negligible, except at a very low rate. But as it has been observed, long before "the sources of thrift dried up, or the stock of capital was drawn on, a more immediate danger would make itself felt—the disinclination of the capitalists to lend."

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<sup>1</sup> Ibid, p. 257.

## CHAPTER 24

### PROFITS

**What is Profit ?** The net income which accrues to the owner of a business after all costs are accounted for is said to be his profit. It is thus any income which is in excess of costs. The costs include, wages, rent, interest, the earnings of management, taxes, depreciation, etc. In the words of Marshall, the profits of a business are "the excess of its receipts over its outgoings."

Generally, however, by profit we mean the difference between the total expenses which a producer incurs in producing a commodity and the total revenue which he obtains from its sale.<sup>1</sup>

This concept of profit, that is, the gross profit, however, includes certain elements which should be excluded in order to calculate the net profit. Take, for instance, the earnings of management. The owner of a business undertakes the work of management just as a salaried manager of a joint stock company does. In the case of the latter, that is, the joint stock company, the salary of the manager, who does the work of management is included in its expenses, *i.e.*, excluded from its profits, whereas in the case of the former, the owner does the same kind of work, but without any expense, hence, because of owner's efforts, profits are more. To find out the net profit, we should, therefore, deduct the expenses to which the owner would be put if he had to hire the services of a manager like

<sup>1</sup> This difference may be expressed either as a return on capital, that is, the total profit over a year being related to the amount of capital invested ; or, as a rate of turnover, that is, as the proportion by which the price per unit sold exceeds its cost.

By the annual rate of profit Marshall means the ratio which the yearly profits bear to the capital invested in a business and by the rate of profits on the turnover he means the rate of profits that are made every time the capital of the business is turned over, that is, every time sales are made equal to the capital.

the joint stock company. In other words, we should deduct the amount which he could obtain as his salary if he were employed as a manager in a joint stock company. Secondly, the gross profits include an element of interest. The interest to be paid on borrowed capital is obviously an expense and therefore excluded from net profits. But when one's own capital is used in the business no deduction is made. While calculating the net profit, from the gross return on capital we should, therefore, deduct the amount which he might have earned by lending it. Thirdly, the rent of land or buildings owned by the business man himself should be excluded from the gross profit to ascertain the net profit.

**Profits and the Earnings of other Factors of Production**<sup>1</sup> : Profit differs from rent, wage and interest, that is, the earnings of the other factors of production, namely, land, labour and capital in three important ways. In the first place, while profit may be negative, neither rent, nor wage nor interest is ever likely to be negative. Secondly, profit fluctuates more than the earnings of any other factor of production, because its response to price changes is immediate, whereas the other incomes (rent, wage or interest) are adjusted slowly. Thirdly, profit is an uncertain income—a residue determined by a number of forces whereas the other incomes, *viz.*, rent, wage, or interest, are contractual and, therefore, certain.

<sup>1</sup> According to Taussig, profits can be "regarded simply as a form of wages." An entrepreneur earns his income because of his skill and ability in organising and co-ordinating the different factors, his shrewd judgment etc. The profit, that is, the reward he earns for these qualities are, according to him, analogous to wages because though mental and with certain peculiarities, the activity of an entrepreneur for which he earns profits is nothing but a form of labour. Hence, the reward he obtains, that is, the profits, should be regarded as wages. But as we have discussed, there are several reasons which distinguish profit from wage, the earning of labour. The wage is certain and does not fluctuate in the way the profit does. Nor does the labourer assume the type of risks for undertaking which profits accrue to the entrepreneur. The chance element, so often ~~exists~~ in profit, is nil in wage. Wage, again, can never be negative.

### **Normal Profit, Monopoly Profit and Windfall Profit :**

**Normal Profit :** Normal profit, according to Marshall, is earned by an equilibrium firm, that is, the firm which has neither any tendency to expand nor to contract. In other words, only a representative firm earns normal profit and it is included in the long run supply price of an industry obeying the law of increasing returns.

**Monopoly Profit :** Profit may be maintained at a level higher than what is necessary to induce the producers to undertake risk and uncertainty. Monopoly profit is possible only when the entry into the trade is not free or when there exist obstacles to the acquisition of command over capital or materials by desirous men. In other words, monopoly profit arises through the ability of the entrepreneur to control the output in such a way that the price of the product does not fall to a level which is just equal to the costs. The nature of the demand for the product, of course, has to be such that at some possible point of output the price will be in excess of the costs.

**Windfall Profit :** Windfall profits are those profits which arise in competitive industries from time to time although the firms in the industry do not anticipate them and the sources from which they arise are entirely beyond their control. For instance, firms may enjoy windfall profits because of a rise in the price of the product resulting from currency inflation. Firms, which might have a stock of the product manufactured or purchased earlier *i.e.*, when the costs were lower, will now earn windfall profit by selling them at a higher price. Similarly, it is possible that some firms which might have contracted for labour and raw materials when the prices were low, will earn windfall profit by using them, (*i.e.*, the labour and the raw materials) to manufacture the product whose price has now risen, (that is, whose price is now higher than what was anticipated at the time when the contracts were made).

Firms, again, may earn windfall profit if the demand for the product increases suddenly due to, say, a change in the

fashion or taste of the consumers, or because of a change in the distribution of their income. The existing firms in the industry will thus earn windfall profits until new firms enter the industry and the supply of the product increases again to the point where the price becomes just equal to the cost and the windfall profit is eliminated.

### **Different Theories of Profit : Their Criticisms**

**The Risk Theory Profit :** Any business enterprise involves risks and it is the function of the entrepreneur to undertake these risks involved in the enterprise which he would not do were not there the reward, that is, the profit, as an inducement. Production often involves, among other risks, even the risk of the loss of capital. An entrepreneur's reward, therefore, has to be considerably more than the likely return on capital from safer investment. Profits, therefore, are the reward of the entrepreneur who assumes the risks involved in the business enterprise. This is, in brief, the Risk Theory of profit was popularised by Hawley.

**Criticism :** The theory implies a correlationship between profit and risk, that is, the greater the risk, the larger will be the profit. Profits, no doubt arise because risks are undertaken by the entrepreneurs in the different enterprises. But there hardly exists any such direct correlationship between the profit and the degree of the risks involved in the enterprise. For, business men's ability to co-ordinate different factors and to organise them, their shrewdness, personal behaviour and dealings etc., also earn reward for them. Secondly, some firms may earn what are known as the '*profits of Innovation*.'<sup>1</sup> For instance, opening of a new market for any product may give the '*profits of Innovation*' to those firms which get the opportunity to sell in that market until the surplus gains disappear as a result of competition of other firms in the industry.

<sup>1</sup> *Profits of innovation*, of course, are purely temporary and are similar to profits of partial monopoly because they depend upon the smallness of the number of firms which first adopt the *innovation*.



Assumption of risks, therefore, does not provide the sole rationale of the phenomenon profit.<sup>1</sup> Nor, again, all kinds of risks give rise to profits. Knight, for instance, makes a distinction, between those risks which are known, that is, whose incidence can be measured and, therefore, which are insurable, *e.g.*, fire and accident, and those risks which cannot be known, that is, whose incidence cannot be measured beforehand, *e.g.*, risk of loss due to sudden change in the demand for the product because of a change in the fashion, or the risk of loss due to loss of market resulting from political troubles between the countries engaged in trade, etc. The risks of the former type since they are insurable and can be provided for in advance do not cause any disutility and the premium for these risks is included in the costs of the firm and hence, cannot be said to be profit. According to Knight, therefore, profits do not arise for assumption of such risks. But the risks of the latter type, that is, which are unknown and not measurable beforehand, do generate a feeling of uncertainty and, therefore, involve disutility. The entrepreneur, therefore, has to be induced to undertake these risks by a reward,—the profits.

Whenever, therefore, it is possible to eliminate the element of risk, either through insurance or through any other method, the profits due to the element of risk will vanish. The normal price of the product in that case will have to cover the insurance premium as a cost.<sup>2</sup>

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<sup>1</sup> Carver, therefore, argues that profits arise not because risks are 'undertaken' but because they are 'avoided.'

<sup>2</sup> Uncertainty bearing, according to some, causes disutility like 'waiting' and therefore, should be regarded as a separate factor of production. It is the function of the entrepreneur to bear the uncertainty of productive activities just as it is the function of the capitalist to supply 'waiting.' Profits, therefore, are said to be the entrepreneur's reward for bearing these uncertainties.

Such a view, however, is hardly acceptable. Uncertainty bearing cannot be regarded as a separate factor for various reasons. In the first place, profit does not accrue simply and solely because the entrepreneur assumes uncertainty. It is, as we have observed, also a reward for his able management, shrewd judgment etc. Secondly, the theory may be acceptable only

**Rent Theory of Profit :** The Rent Theory of Profit was popularised by F. A. Walker. According to this theory, profits are earned by those entrepreneurs who have superior ability just as, only those pieces of land which possess superior fertility (or situational advantage) earn rent. Profit, therefore, according to Walker, is the rent of ability, earned by the entrepreneurs possessing superior ability. The entrepreneur who just succeeds to cover his costs by selling his products at the current price is the marginal entrepreneur or the no-profit entrepreneur, just as that piece of land the cost of cultivation on which is just covered by the price of the produce is the marginal or the no-rent land. The profits of the superior entrepreneurs, therefore, can be calculated by comparison with the no-profit class of entrepreneurs just as the rent on superior land is calculated by comparison with the marginal or no-rent land. It thus naturally follows that profits also do not enter into the price of the product just as rent does not enter into the price of the produce. This is, in brief, the Rent Theory of Profit.<sup>1</sup>

**Criticism :** In the case of land, the differential gains arise because the supply of land is inelastic and it has no supply price. But the supply of businessmen of superior ability is elastic and there is a supply price of the business ability in command of capital. Secondly, profit, it is pointed out, like rent is not a true surplus; the analogy to rent, therefore, is not warranted. In the case of business enterprises, some entrepreneurs may incur loss, i.e., profit may be negative. But rent in the case of land will be either positive or zero; it can never be negative. Nor, again, can it be said that profits do not enter into price of the product just as rent does not enter into the price of

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if the doctrine of real cost is also accepted, that is, if it is accepted that all costs are ultimately reducible into '*pains and disutilities*.' But since the doctrine of real cost is no longer accepted, uncertainty bearing cannot be regarded as a separate factor of production.

<sup>1</sup> It may be noted that, according to Walker, profits mean only the net gains of the entrepreneur who does not employ his own capital in the business. It constitutes a '*species of the same genus as re*

the produce. In the long run, since the supply of entrepreneurs of superior ability is not governed by nature in the sense in which the supply of land is, the normal profits do form a part of the cost of production, that is, enter into the price of the product. Normal profit is an element of normal supply price of the product. Again, the theory suggests that the profit is the rent of ability. But the ordinary share-holders of a joint stock company who may not possess the least business ability do earn a share of the profits. The Rent Theory of profit, therefore, fails to explain the profit which is enjoyed by the ordinary share-holders of any joint stock company earning profits. Finally, some entrepreneurs may earn windfall profits or what are known as the '*profits of innovation*' which obviously have no connection with their ability as businessmen.

The Rent Theory of Walker, therefore, seeks to explain the differences in profits but does not explain what is more fundamental—*viz.*, the nature of profit.

**The Marginal Productivity Theory of Profit :** According to this theory, profits or the earnings of the entrepreneur, tend to equal the marginal net product of one unit of the factor—organisation. That is, in other words, profits tend to be equal to the amount which the community is able to produce in excess with the services of the entrepreneur over what it could produce without his services. It is true, that, this marginal net product of the entrepreneur cannot be determined in the same way as the marginal net product of land, labour and capital can be determined by the application of the principle of substitution at the margin, that is, by adding (or subtracting) one unit of enterprise while keeping the other co-operating factors as constant. For, the forces "bearing upon the employer's remuneration operate indirectly." The marginal productivity theory, however, according to Marshall, applies indirectly to the factor, enterprise. In the business world, the less capable or the 'misfits' are eliminated by a ceaseless process of natural selection. While, therefore, the selection of other factors (besides enterprise) to be employed in the business is

made by the entrepreneur, the selection of the successful entrepreneurs, or the businessmen, by ceaseless elimination of the 'misfits', is made by Nature, or the 'blind forces of competition.'

**Criticism :** Profits, it is said, cannot be explained by the marginal productivity theory which is not directly applicable to the factor enterprise. It is practically impossible to measure the net product of the entrepreneur by adding or withdrawing one unit of enterprise, keeping the other factors used in the business constant. In either case, the whole business will be completely disorganised.

The marginal productivity theory is helpful in measuring the marginal net products of the other factors of production, that is, land, labour and capital and this is done by the entrepreneur. But any attempt to measure the marginal net product of the entrepreneur, even indirectly, is bound to be inexact and misleading.

**The Dynamic Theory of Profit :** Profit, according to J. B. Clark, who propounded this Dynamic Theory, exists only in a dynamic society, that is, in a society which is progressive. In a static society characterised by the absence of any change either in population, or in the stock of capital, or in the technique of production, or in the tastes of the consumers, profit does not exist. The entrepreneur, in such a state, only gets the wages of superintendence, since there would not remain any surplus above the costs because each factor would obtain what it would produce and the price of each product would be equal to its cost of production. But in a dynamic society, changes occur and, therefore, mal-adjustments between supply and demand take place. These mal-adjustments give rise to profits or losses. In a dynamic society, the disequilibrium or the mal-adjustment is brought about not necessarily by the natural forces alone, but the entrepreneur whose constant endeavour is to make larger profits by lowering the cost, himself disturbs the equilibrium and thus creates maladjustment. Such malad-

justment occurs, for example, when he succeeds in adopting some new technique of production or invention which lowers his costs of production and thus enables him to earn profits. He, however, cannot enjoy this profit permanently. For, high profits will allure other producers who will also adopt the same technique or invention and thus competition will set in. Sooner or later, therefore, increased supply will result in a fall in the price of the product and ultimately the profit will cease to exist.<sup>1</sup> "In a way this gain," observes Clark, "is self-annihilating. The uniform rate towards which pure profit tends, though it never reaches it in all groups at once—is a zero rate. . . . Competition tends to annihilate pure profit."

Profits are, therefore, unstable. The entrepreneur who succeeds in adopting an invention or a new technique of production, succeeds in earning a surplus, that is, profit but only temporarily, that is, until competition eliminates it.

**Criticism :** Every change, it is pointed out, does not necessarily disturb the equilibrium or create maladjustment and, therefore, every change cannot be said to be giving rise to profits. There are changes which can be known beforehand and, therefore, can be provided for in advance. These changes, therefore, do not give rise to profit since they do not disturb the equilibrium or cause maladjustments which are said to be the causes of profits. But there are changes which cannot be foreknown and, therefore, cannot be provided for in advance. These changes disturb the equilibrium and cause mal-adjustment and, therefore give rise to profits. Secondly, production even in a static state, is not without certain amount of risk. For, every decision of the entrepreneur, either in the selection of his employees, or in his entering into any contract, financial or otherwise, entails some amount of risk. A wrong decision on his part will mean loss. The entrepreneur, therefore, should

<sup>1</sup> Competition is likely to raise the cost also, since the factors may have to be paid at higher rates than before and thus, sooner or later, the cost will be equal to the price of the product leading, therefore, to the disappearance of the element of profit—the surplus.

earn reward in the shape of profits for the assumption of these risks.

The truth, therefore, is as has been observed by Knight, that any divergence of the actual conditions from those which have been expected and, therefore, on the basis of which business arrangements have been made gives rise to profit. It is not necessarily due to any dynamic change, as Clark seems to suggest, that profit arises.

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## BOOK VI

### MONEY, CREDIT AND BANKING

#### CHAPTER 25

##### Introductory

**What is Money ?** "Money" it has been observed, "is one of the most fundamental of all Man's inventions. Every branch of knowledge has its fundamental discovery. In mechanics it is the wheel, in science fire, in politics the vote. Similarly, in economics, in the whole commercial side of Man's social existence, money is the essential invention on which all the rest is based."<sup>1</sup> It is, therefore, as important as it is interesting for a student of economics to know : What Money is.

While people accept commodities for their own sake—they do not accept money for its own sake. They accept money because they know that others also will accept money, that is, there will always be available ready 'buyer' for money, since people will accept it in exchange for goods and services. This acceptability is the most important quality of money which distinguishes it from other commodities. Anything, therefore, which by custom or by law is generally acceptable without question in payment for goods and services, or in settlements of debts, is money.

Mr. Robertson uses the term money to "denote anything which is widely accepted in payment for goods, or in discharge of other kinds of business obligation."<sup>2</sup> A thing, however, will not be widely acceptable in discharge of such obligations, "unless it is expressed as a multiple of some unit which is regarded as a measure or standard of the value of things in general."<sup>3</sup>

<sup>1</sup> Crowther—An Outline of Money, p. 4.

<sup>2</sup> Rob . . . Money, p. 2.

<sup>3</sup> Ibid.

In a community whose economy is based on division of labour and exchange, the use of money is indispensable. Social economy, has always been and perhaps will ever remain, a monetary economy.

**Why precious metals have been chosen to be used as Money?** In the history of money, the discovery of metals as the most suitable of all commodities to serve as money is perhaps the most important discovery. Several other commodities, even animals like cows, goats etc., were used for the purpose (at one time or other) but they were found wanting and, therefore, discarded. It is, therefore, reasonable to ask : why were they discarded ? Or, put the other way round, why precious metals like gold and silver were found most suitable for serving the purposes of money ? There are several reasons for this choice, *viz.*, these metals are generally acceptable, easily handled and are cognizable, that is, are ascertainable with less difficulty. Besides, they are durable, *i.e.*, do not waste away soon and are portable, *i.e.*, their cost of transport from one place to another is low, since they contain high value in small bulk, and are divisible too, that is, the value of coins may be determined according to the amount of metal contained in them. Furthermore, the annual production of these metals is only a small fraction of their total amount already in existence and, therefore, their value remains more or less stable, since the supply does not vary much from year to year.

These, then, are the reasons why gold and silver were chosen to serve as money. These metals were chosen, in the words of Crowther, "simply because of their suitability for the job ; they are easily handled and stored, they do not deteriorate, they have just about the right degree of scarcity, and they can be relied upon neither to increase nor to diminish in quantity except gradually." <sup>1</sup>

There were, however, two main difficulties with these metals *viz.*, ascertaining of their quality and secondly, divid-

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<sup>1</sup> Op. Cit.—p. 8.



ing them into convenient units. But these difficulties were got over by the invention of the system of coinage.

### **Difficulties of Barter : Economic Functions of Money :**

In the earliest stages of human history, we find that the primitive man had but a few needs which he could satisfy either by his own efforts, that is, by producing whatever he needed, or by barter, that is, by direct exchange of goods against goods. The trading in the primitive society, thus, consisted entirely of barter. But there are certain inherent difficulties and inconveniences in trading by barter. In the first place, there is the difficulty of bringing the two parties—the buyer and the seller together, that is, exchange by barter requires what is called a “double coincidence of wants” which seldom occurs. For, a man eager to exchange what he has with what he wants must find out a man who wants what he has and possesses what he wants : To take an illustration : Suppose, there are three persons, namely, A, B and C. A has goats and wants pigs, B has pigs but he is not interested in goats, he wants sheep instead. And C, while he is interested in goats but does not possess pigs, he has some nuts. How can then these three persons exchange what they have for what they want ? It is obviously impossible. Money overcomes this difficulty unavoidable in exchange by barter, because, money serves as a medium of exchange, and goods, when there is money in use, are exchanged for money. In our illustration A, B and C can obtain money in exchange for goats, pigs and nuts and with the money can buy pigs, sheep and goat respectively. Money thus helps exchange by mediating. It, therefore, serves as a medium of exchange, that is, it mediates in the exchange.

A second difficulty of exchange by barter is the absence of means of sub-division. A, for instance, who has goats, wants some nuts. But, how can he ? Obviously, he cannot exchange a part of the goat he has for obtaining a few nuts. The use of money as a measure of value removes this difficulty of settling the . A can sell his goat and spend only a part of

the sum received by selling the goat for purchasing a few nuts he wants. In barter economy, when the number of articles is innumerable—the want of a common measure of value will be felt all the more. For, in that case, we would have to carry in our minds “a complete catalogue of exchange-values, expressing the value of each commodity in terms of a different amount of every other commodity.” Money, serving as it does as a common denominator of exchange-values, removes this difficulty and facilitates a system of prices.<sup>1</sup>

Thirdly, the problem of storing presents a real difficulty in barter economy. For, commodities will perish, sooner or later, and, therefore, cannot be stored for a long period. But one can store value by storing money, that is, the purchasing power, easily and for a considerably long period. Money, therefore, serves as a store of value and thus removes the difficulty of storing which exists in barter economy.

Finally, in the absence of money, that is, in the absence of a unit for the measurement of debts, lending and borrowing would become extremely difficult since there would always remain the risk of fluctuations in the value of the commodity in terms of which loans or contracts would be made. Money facilitates such loan transactions since people believe that its value, or purchasing power, will not change during the period of the contract. Besides, it would be “impossible also to set debts to a given value against credits to the same value and so to cancel out payments between different traders. Every transaction would stand by itself. Dealings in debts—the work of the Stock Exchange, of the Investment Trusts, of the Banks and other financial intermediaries—would cease.”<sup>2</sup>

**Kinds of Money :** Money has been classified in various ways. Of these, the classifications made by Keynes and Robertson are, in brief, given below.

<sup>1</sup> The monetary unit for purposes of calculation of the values of different commodities is called, ‘the unit of account.’

<sup>2</sup> Cairncross—Introduction to Economics: (1944) p. 295.]

**Keynes' Classification :** Keynes has drawn a distinction between Money of Account and Money proper. By *Money of Account* is meant that in terms of which Debts, Prices and General Purchasing Power are expressed. It is, according to Keynes, the primary concept<sup>1</sup> of a Theory of Money. It (Money of Account) thus comes into existence along with Debts (which are contracts for deferred payment) and Price-lists (which are offers of contracts for sale or purchase).

By Money-proper is meant that "by delivery of which debt-contracts and price-contracts are *discharged*, and in the shape of which a store of General Purchasing Power is held,' e.g., pound in England and rupee in India. Money itself thus derives its character from its relationship to the *Money-of-Account*, since "the debts and prices must first have been expressed in terms of the latter."

The distinction between Money and Money-of-Account may be elucidated by saying that the money of account is the *description* or *title* and the money is the *thing* which answers to this description. The money-of-account is continuous and hence, the description may remain the same, while the actual money answering that description might have changed.

Money-proper, again, is sub-divided into *Commodity Money*, and *Representative Money*, two of whose sub-species are *Fiat-Money* and *Managed-Money*.

*Commodity Money* is "composed of actual units of a particular freely-obtainable, non-monopolised commodity which happens to have been chosen for the familiar purposes of money, but the supply of which is governed—like that of any other commodity—by scarcity and cost of production."<sup>1</sup>

By *Representative Money* is meant something the 'intrinsic value of the material substance of which is divorced from its monetary face value.' *Representative Money* may, however, be convertible into '*Commodity Money*,' e.g., notes.

<sup>1</sup> Keynes' Treatise, Vol. I., p. 7.

*Fiat Money* is *Representative Money* (or *Token Money*) "which is created and issued by the State, but is not convertible by law into anything other than itself, and has no fixed value in terms of an objective standard."<sup>1</sup>

*Managed Money*—It is similar to the *Fiat Money* with this difference that the state undertakes to manage the "conditions of its issue in such a way that, by convertibility or otherwise, it shall have a determinate value in terms of an objective standard."

There is thus similarity between *Commodity Money* and *Managed Money* in that they are related to an objective standard of value and there is similarity between *Managed Money* and *Fiat Money* in that they are representative or paper money "having relatively little or no intrinsic value apart from the law or practice of the State."

**Bank-Money :** By *Bank-Money* is meant simply an "acknowledgement of a private debt, expressed in the money-of-account, which is used by passing from one hand to another, alternatively with Money Proper to settle a transaction."<sup>2</sup> When, however, the *Bank-Money* does not represent a private debt but represents a debt owing by the State, and the State uses its "chartalist prerogative to declare that the debt itself is an acceptable discharge of a liability" it is transformed into a species of Money Proper, and is known as *Representative Money*.

The following is another way of classification of Money adopted by Robertson.

**Bank Money and Common Money :** *Bank Money* requires special knowledge, and the making of special arrangements on the part of the recipient ; bank-money, and some kinds of *optional money* "carry the right to exchange them on application to the proper quarter for something else," and

<sup>1</sup> Ibid—p. 7.

<sup>2</sup> The aggregate of the State-Money and the Bank-Money is called by Keynes, Current Money.

*Common Money* is that which is universally acceptable within a given political area.

**Full Legal Tender Money :** By it is meant that which is certified by law to be valid in final discharge of a debt for any amount from one fellow citizen to another.

**Subsidiary Money and Optional Money :** By *Subsidiary Money* is meant that which is only so certified for debts up to a limited small amount and *optional money* refers to that sub-order which is not so certified at all.

**Convertible and Definitive Money :** *Convertible legal tender money* is that "which one ordinary citizen must accept as final payment from another, but in exchange for which some central institution is bound to give something else if requested." *Definitive money* is that in which "even such a central institution is entitled to make a final and ultimate discharge of its obligations, including the obligation to convert convertible money."

**Token and Full-bodied Money :** Money whose value is materially greater than the value of the stuff of which it is composed is called *Token Money*, and the money whose value is not materially greater than that of its component stuff is called *Full-bodied money*.

**Coinage : The Different Systems :** By coinage is meant the manufacture of metallic money. Coins are stamped and certified pieces of metals. Coins, in a good system of coinage, should be uniform and homogeneous in fineness, size, weight, shape etc. Under modern system, intricate designs are adopted to prevent counterfeiting.

The system of coinage is known as **Free and Gratuitous** when private citizens can bring bullion to the mint and have it converted into coins. Such a system is said to be **gratuitous** because for mintage no charge is made. The system of coinage may, however, be free but not gratuitous.

The system of coinage is known as Limited Coinage when the private citizens are not allowed, as in the above case, to bring bullion to the mint for conversion into coins ; when, that is to say, the coinage is done only on government account.

The government of a country may, however, charge a fee for coining. And when the fee charged just covers the cost of converting the bullion into coins, it is said to be *Mintage* or *Brassage*. When the fee charged is higher than the cost of coinage, it is called Seigniorage.<sup>1</sup>

And the rate at which gold coin is given by the mint in exchange for gold bullion is called the *Mint Price of Gold*. Before World War I in England, the mint price of standard gold was £3-17s.-10½d. per ounce, that is, each ounce of gold was manufactured into sovereigns at that rate.

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<sup>1</sup> The seigniorage may, however, be taken in two ways *viz.*, either by inserting a certain proportion of alloy in the coins in place of precious metal, *i.e.*, gold or silver, or by charging a fee higher than the actual cost of converting the bullion into coins.

## CHAPTER 26

### THE VALUE OF MONEY

**The Value of Money :** The peculiarity which distinguishes money from the other commodities is that while the commodities are wanted for their own sake—money is wanted not for its own sake. People desire to have money because they desire to have commodities which money will buy. Money, that is to say, is just a medium of exchange. When, therefore, we speak of the value of money, we do not mean its intrinsic value ; what we have in our minds is the quantity of goods and services which a unit of money will buy. The price of a commodity is the ratio at which it exchanges for money. The value of money, at any given time, therefore, may be regarded as the “reciprocal of the general level of prices,” *i.e.*, it will be halved when the general level of prices is doubled and doubled when the general level of prices is halved.

**The forces which affect the value of Money :** The forces which affect the value of any commodity may be grouped under two headings *viz.*, its demand and its supply. Similarly, the forces which affect the value of money may be grouped under the two categories of demand and supply. That is, at any given time, the collective demand, in terms of money, acting on a given supply of goods and services determines the prices of these goods and services, and, in inverse ratio, determines the value of money. Given, again, the supply, that is, the total amount of money, at any given time, an increase in the demand for it will lead to an increase in its value *i.e.*, to a general fall in prices *e.g.*, during depression. Conversely, a fall in the demand, when the supply is given, will lead to a general rise in prices, that is, to a fall in the value of money, *e.g.* when people apprehend a rise in the prices of commodities, and so endeavour to hold more commodities and less money, then the increased purchases of commodities will result in a rise in their prices and a fall in the value of a given amount of money.

The supply of money, at any given time, in a country depends, however, not only on its total quantity, but also on its monetary and banking systems and on what is known as the velocity of circulation of the quantity of money and the bank deposits. Now, what exactly is understood by the velocity of circulation of money? It is not difficult to find out that the community's total effective demand during a given period of time is greater than the actual amount of money in circulation. This is so, because, on careful examination, it will be found, that each unit of money is spent several times during a given period of time, for, each unit, during that period, goes from one person to another or from one firm to another several times. This is what is known as the velocity of circulation of money. By velocity of circulation is meant the average number of times that each piece of money changes hands *i.e.*, passes from hand to hand during a given period of time. Obviously, then, in estimating the demand for money, it is necessary to take into account not only the volume of goods to be disposed of within a given period of time but also the 'frequency with which each of them changes hands.'<sup>1</sup>

One more fundamental peculiarity regarding money has to be remembered: The value of money, though it may appear strange to the uninitiated, is never the same for any two persons when they set out to spend it. The reason is that different people are interested in different sets of goods, and there may,

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<sup>1</sup> Value of money may be understood either as "income-value" or as "transaction-value." We should, that is to say, be clear in our minds whether we are thinking of the value of money, "in terms only of the goods and services which enter into final consumption," or of the value of money "in terms of all the goods and services of whatever kind which are exchanged by its aid." According to Mr. Robertson, these two may be called the 'income-value' and the 'transaction-value' of money respectively. In the same way there may be labour value of money by which is meant the "amount of labour of a given quality which a unit of money will command." Robertson-Money, p. 18.

**Income Velocity of Circulation of Money:** By income velocity of circulation of money is meant not the average number of times each piece of money is spent for any purpose whatsoever, but the average number of times



therefore, be quite a number of different values of money according to the different uses to which it is put. The phrase, "value of money" therefore, without any qualification conveys no definite meaning. "The only practical way to get over this difficulty" observes Crowther, "is arbitrarily to establish certain standard values of money." Generally, three standards are distinguished. These are, firstly, the wholesale value of money, that is, the value of money in buying those commodities (usually raw materials) which are bought in large quantities and the prices of which are quoted and recorded on public markets. Secondly, the retail value of money, or the cost of living value, that is, the value of money in buying the goods and services that the ordinary family consumes. It is, however, difficult to know the retail value of money. For, one has, in order to be exact, to find out firstly, what the average family buys with its income, and secondly, that is, after such a standard list of commodities has been prepared, to find out their respective prices.<sup>1</sup> Thirdly, the labour value of money, *i.e.*, the value of money in hiring labour. This can be determined from the rate of wages of the workers for a day's work. The accounting of the great variety of labour of different types and their wages, of course, presents some real difficulties.

The value of money or the purchasing power of money thus has to be understood in a relative sense. It is, therefore, difficult to give an exact definition of the value of money. By the value of money with reference to all the standards referred to above, we thus mean the relative value and not the absolute value of money. "The wholesale value of money is the value of money to a person who happens to

it is spent in purchase of the goods and services which enter into ordinary consumption. This "income-velocity" of circulation of money is, however, much smaller than its "transaction-velocity."—(Robertson—Money, p. 34).

<sup>1</sup> The price, for instance, of bread varies from town to town. It is, therefore, necessary that for each commodity 'a large number of price quotations must be collected before an average is struck'. (Crowther—An Outline of Money).

be concerned only with those commodities that are traded in wholesale on a public market. The retail value of money is its value to a family that happens to buy exactly those things which it has been established by inquiry that the average family does buy. And the labour value of money is its value to a man or a business firm that wants to hire every variety of labour.”<sup>1</sup>

### Measuring the Value of Money : The Index Number :

An index number showing as it does the general trend of prices of goods and services, is also indicative of changes in the value of money. That is, the value of money is high or low according as the general trend of prices shown in the index number is low or high. The purchasing power of money, that is to say, varies inversely with the price-level. Before undertaking the construction of an index number it is, however, necessary to know what is meant by *Price Level* and also the purposes for which an index number may be constructed.

As consumers, we are interested in a number of commodities on which we spend our money. And we know that the prices of all these articles do not always move in the same direction ; while the prices of some may rise, those of others may fall, and they may do so (*i.e.* rise or fall) at different rates. How can we then, it may be asked, measure the changes in the prices of these different commodities ? The way by which this difficulty is sought to be overcome is by taking into consideration the prices of many articles and by averaging them. By thus averaging, we can find an average price for a year, which we may take as the standard year. And the changes in the average price of commodities, or, in other words, in the value of money, can be measured by comparing the average price in any other year with the average price of the standard year. The value of money will be high or low, according as the average price of commodities registers a fall or a rise.

<sup>1</sup> Crowther—An Outlines of Money, p. 86.

The average of the prices of the goods and services on which money is spent for various purposes is called the *price-level* and a series of such price-levels is known as the *Index-numbers*. An index number thus is a device for finding out the relative value of money from the prices of a selected number of goods. It shows the average percentage ratio that the prices of a given set of goods at one time or place bears to the prices of the same set of goods at another time or place.

"There are many types and purposes of expenditure," says Keynes "in which we may be interested at one time or another, corresponding to each of which there is an appropriate composite commodity. The price of a composite commodity which is representative of some type of expenditure, we shall call a *Price-level*; and the series of numbers indicative of changes in a given price-level we shall call *Index-Numbers*".<sup>1</sup>

Money of Account is thus the term in which the units of purchasing power are expressed. Money is the form in which the units of purchasing power are held and the "Index-Number of the price of the composite commodity representative of consumption is the standard by which units of Purchasing Power are measured."<sup>2</sup>

**Different Purposes for which Index-Numbers may be useful :** The index-number is useful not only for measuring the changes in the purchasing power of money ; it is useful for other purposes also. For instance, we may construct Cost of Living Index-Number to measure the changes in the cost of living of the working class. It thus helps us to measure roughly the changes in the amount of welfare enjoyed by the people from time to time as indicated by the changes in the purchasing power of money. Again, we may have a Wholesale Index-Number to measure the changes in the prices of raw materials and semi-finished goods at wholesale.

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<sup>1</sup> Keynes—Treatise, Vol. I., p. 53.

<sup>2</sup> Ibid—]     ▲ - -

An index-number may also furnish a basis for the equitable discharge of long-term debts. And lastly, by taking into account the wholesale prices of important commodities, a Tabular Standard may be constructed with a view to stabilise the price-level.

**How to Construct an Index-Number ?** There are certain difficulties in the construction of an Index-Number. We have, in the first place, to choose a *base* year which should be a year of normal economic activity. The changes in the prices of the other years are to be measured by a comparison with the prices of this year.<sup>1</sup>

The next step in the construction of an index number is to make a representative selection of commodities and obtain quotations of the market prices of these commodities both in the year which is chosen as the base year and in the years which we desire to compare.

We now relate the prices in these years to the prices in the base year, that is, the year chosen as the basis of comparison.

To take an illustration : Suppose the price of wheat per maund is Rs. 8 in the base year, say, year I and is Rs. 6 and 9 respectively in the other two years, say, years II and III. We now represent the price of a maund of wheat in the year I by 100, and that in the two other years *i.e.*, years II and III, by 75 and 112·5, that is, as a percentage of the price of wheat in year I, the base year. These numbers *viz.*, 75, 112·5 are known as price-relatives. The prices of other commodities which may be taken into consideration may, in the same way, be expressed in terms of price-relatives. These price-relatives are helpful in that they help us to read off the percentage change in the price since the base year and hence, we can, know accurately in what proportion the price has risen or fallen. Hav-

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<sup>1</sup> Selection of a satisfactory base year is often very difficult. Instead of taking any particular year as the base year, therefore, an average of several successive years may be taken as the *base period*. This is supposed to yield a more accurate result, because the resulting index cannot be biased by the peculiarities of any single year.

ing obtained a complete series of price-relatives for each article, we can calculate the average change in the prices by adding together the price-relatives for each year and then dividing the resultant figure by the number of articles taken into consideration.<sup>1</sup>

The following table illustrates how an Index-Number of the simple average type is constructed.

TABLE (I)

Commodities	Year I		Year II		Year III	
	<i>(The base year)</i>					
	Price	Price rela- tives	Price	Price rela- tives	Price	Price rela- tives
1. Rice (per md.)	Rs. 12	100	Rs. 15	125	Rs. 18	150
2. Wheat    ,,	„ 8	100	„ 6	75	„ 10	125
3. Flour     ,,	„ 10	100	„ 7-8-0	75	„ 12-8-0	125
4. Pulses    ,,	„ 5	100	„ 4	80	„ 7-8-0	150
5. Tea (per lb.)	„ 3	100	„ 2-4-0	75	„ 4-8-0	150
Number of	Total	500		430		700
Commodities—5	Average	100		86		140

The numbers 100, 86 and 140 are the Index-Numbers of the years I, II and III respectively, indicating the proportions in which the prices have fallen or risen since the base year, *i.e.* Year I. The prices, that is to say, in the year II are 14 p. c. lower and in the year III, are 40 p. c. higher, than those in the base year (*i.e.*, year I). This, in other words, means that cor-

<sup>1</sup> If there are  $n$  commodities, by thus adding the price-relatives and dividing the resultant figure by  $n$  we obtain the simple average or the Arithmetic Mean. Sometimes, however, instead of being added together the price relatives are multiplied together in order to obtain the Geometric Mean. If, therefore, there are  $n$  commodities, the  $n$ th root of the product is then taken.

responding but in opposite direction, changes have taken place in the value of money too. One thing, however, should be noted in this connection, *viz.*, these numbers represent only the average changes in the prices and not the actual changes in the prices of particular articles.

Such an Index-Number, however, is considered defective since it attaches equal importance to each of the commodities taken into consideration. But this is obviously misleading for the simple reason that we do not attach equal importance to each commodity. A little change in the price of rice, for example, affects the cost of living of the people much more than does a considerable change in the price of say, tea. We, therefore, err when we give equal importance and, therefore, equal weight to both rice and tea. It is, therefore, necessary, in order to ensure that the index-number indicates the correct trend of price changes and their effects on the cost of living of the people, that due weight should be given to each change in the price. We should, therefore, construct an index number by taking a 'weighted' instead of a simple average of price-relatives. In order to give proper 'weight' to each commodity, it is necessary to study carefully the family budgets and attach 'weight' to different commodities with reference to their relative importance, that is, with reference to the relative amount of their income which the people spend on their consumption. In other words, the weights should correspond to the proportion between their expenditure on each commodity and their total expenditure on all commodities taken together. These 'weights' then should be multiplied by the appropriate price-relatives and an average price-level will be known by dividing the total for each year by the sum of the 'weights' and not by the number of commodities as in the case of index-number of the simple average type. To take again an illustration: Suppose that the 'weights' given to the five commodities taken in the former illustration namely, rice, wheat, flour, pulses and tea, according to their relative importance, are 10, 8, 4, 2, 1. The weight-

ed average index number for the years II and III will now be as follows :

TABLE (II)

Commodities	Price-relatives			Weights	Expenditure-relatives <sup>1</sup>		
	Yr. I	Yr. II	Yr. III		Price-relatives multiplied by 'weights'.		
	Yr. I	Yr. II	Yr. III		Yr. I	Yr. II	Yr. III
1. Rice (per md.)	100	125	150	10	1,000	1,250	1,500
2. Wheat „	100	75	125	8	800	600	1,000
3. Flour „	100	75	125	4	400	300	500
4. Pulses „	100	80	150	2	200	160	300
5. Tea (per lb.)	100	75	150	1	100	75	150
Number of Commodities	5						
Total	500	430	700	25	2,500	2,385	3,450
Average	100	86	140	—	100	95·4	138

Earlier, in the simple average index-number (Table I) we have seen that the price-level in year II indicated a fall of 14 per cent and that in the year III indicated a rise of 40 per cent as compared with the price-level in the base year, *i.e.*, year I. But now when due 'weights' have been given to the commodities according to their relative importance in national consumption, we notice that the price-level in year II has fallen by 4·6 per cent and that in year III has risen by 38 per cent only.

**Difficulties in the construction of Index-Numbers :** The first difficulty in the construction of an index-number is the choice of a year which should provide a satisfactory base from

<sup>1</sup> The last three columns of Table (II) are headed as Expenditure-Relatives because if the figures in the column 5 represent the expenditure on each commodity in the year I, the expenditures on the same commodity at the prices ruling in the years II and III, are exactly represented by the figures in columns 6 and 7.

which we can measure the changes in prices and weights which are in keeping with our normal consumption. The year selected as the base year should be a year of normal economic activity and the prices should be in a fairly normal relationship to one another and the expenditure of the people in that year should also be distributed between each commodity in a normal way. Secondly, it is not unlikely even in a short period that the commodities and services may undergo changes in quality. The extraction of price-relatives, therefore, from the information about the prices only is a difficult task. We should, therefore, be very careful while making comparison between different prices, since these prices may be paid for goods and services which change from year to year. Thirdly, it is a common knowledge that no two persons or families spend money on similar things nor do they buy articles in the same amounts. The 'weights', therefore, which are appropriate to one man's or one family's expenditure are very likely to be inappropriate to another man's or another family's expenditure. The problem of giving due weight, therefore, is a difficult one. And it is desirable that we should have separate indices for people in different income groups. Fourthly, our tastes and habits are changing ceaselessly. Hence, we buy different things at different times according to our new tastes and habits. Some articles may become relatively dear while others may remain relatively cheaper and we adapt our consumption to take advantage of the change in the relative prices. Thus the bundle of commodities purchased in one year differs from that purchased in another year. Any exact comparison, therefore, between the purchasing power of money in different years becomes impossible. Such comparison is possible only when we spend money to make the same purchases in different years. The difficulties arising from the introduction of new commodities and changes in our purchases, it is suggested, may be overcome by construction of a chain index-number. That is, the weights may be revised every year in accordance with the observed changes in con-



sumption and prices in each year may be linked with the prices in the succeeding year. The series of links may then be formed into a chain by letting 100 represent the price-level in some base year and attaching each link, that is, each successive change in prices, in turn. But "such a chain index number" it has been observed, "however, would disregard rather than solve our problem. It would be based on the assumption that changes in purchase in adjacent years were negligible. But it is precisely these changes which we wish to take into account. If we give up using butter when margarine comes on the market, an index of the cost of living ought to reflect the advantage to us of the new and cheaper substitute. But all that a chain index does is to attach more and more importance to changes in the price of margarine as our consumption of it increases. This is an advance on the more usual procedure of assuming that we eat just as much butter as before. But in the long run it is little more satisfactory. The cumulative advantages which we derive from the new commodities introduced year by year are equally disregarded."<sup>1</sup>

In view of so many difficulties in the construction of an index number, it may seem to be of little use to take the trouble of constructing such index-numbers. There would obviously be no need to construct an index number if all prices could be expected to move together. For, in that case, the change in any one price would measure the change in the average level of prices. But in reality, instead of moving together, they move in different directions and also at different rates. While some prices rise, others may fall. Some, again, may rise more than the others whereas some may fall less than others. The problem of the construction of an index number is, therefore, the problem of averaging one change against another. And these index-numbers are helpful in that they "sum up the changes that re-orientate business activity; they make it immensely easier

<sup>1</sup> Cairncross—Op. Cit., p. 338.

for us to interpret these changes intelligently and to control them by wise planning."

**Kinds of Index-Numbers :** The purchasing power of money, we have seen, is not the same for any two persons, nor is it the same for any two purposes for which it may be used. Money, that is to say, has different purchasing power for different people and also for different purposes for which they spend it. So long, in our illustration of the construction of an index-number we tacitly assumed that people spend money to buy finished goods. But it is not always true, for, money buys not only finished goods but various other commodities at different stages in the process of production, *viz.*, raw materials, semi-finished goods, etc. And it is just possible that the purchasing power of money over these different types of goods may change in different directions and in different degrees from its purchasing power over the finished goods. There are, therefore, different price-levels corresponding to the different groups of things bought with money *e.g.*, the wholesale price-level, export price-level, price-level of capital goods etc. By the same method, which we have discussed, separate indices can be constructed to measure the changes in each of these price-levels. We should, therefore, do well to remember these points while constructing the Index-numbers for different purposes.

**The Wholesale Index-Number :** The purpose of the wholesale Index-Number is to measure the changes in the prices of basic commodities (often these are divided into two groups, *viz.*, foods and materials or agricultural and non-agricultural) at wholesale. It is, therefore, based almost entirely on the prices of raw materials in various stages of completion.

Now-a-days care is taken to give due 'weight' to the different articles according to their importance in the national economy.

Such an index number, however, is not the same as the consumption standard and, therefore, cannot be said to be

correct index of the purchasing power of money for various reasons. For example, the wholesale standard and the consumption standard may fluctuate differently for various reasons, *e.g.*, 'the goods of which the former takes account in an unfinished state are different, or are accounted for in different proportions, from the goods of which the latter takes account in a finished state.' Again, there may be disparity between the changes in the two standards because "the unfinished goods considered by the former correspond in price by anticipation to finished goods existing at a different *date* from the finished goods considered by the latter." Thirdly, the wholesale index number ignores personal services and most of the costs of marketing. Finally, the wholesale index fluctuates more violently than a consumption index, because the former is more influenced by "the price of highly specialised items, whereas the latter takes more account of relatively unspecialised services, such as transport and marketing." There is thus no reason to expect that the wholesale index and the consumption index over long periods, will move together.

**Consumption Standard :** The index-number constructed with the object of measuring the purchasing power of money should include, either directly or indirectly, once and once only, all the items which enter into final consumption and these should be weighted in proportion to the amount of their money income which the consuming public spend on them.

Such an index-number, although covers a large and representative part of total consumption, has still a lacuna, since it ignores the importance of personal services. A true consumption standard or the index of the general price-levels, therefore, according to Carl Snyder may be constructed by "combining four types of price-level" *i.e.*, the wholesale prices, wages, cost of living, and rent, giving the following weights to them respectively 2,  $3\frac{1}{2}$ ,  $8\frac{1}{2}$  and 1.

**The Working Class Index Number :** The cost of living index number for the working class is a very useful guide for the wage fixation, and also for making revision in the rates of wages according to the changes in the circumstances. Such an index-number includes the retail prices of the important items of consumption goods purchased by the working class people. In constructing such an index number, however, proper weights should be given to the different items of consumption goods.

**The Earnings Standard :** It is, as we have already observed, very difficult to measure the Labour Power of Money. Construction of the Earnings Standard with a view to measuring the purchasing power of money over units of human labour is very difficult because there are quite a large number of variety of human labour and we do not have a common unit in terms of which we can compare these different types of human labour. Besides, the agreeableness or otherwise, presence or absence of risk, regularity or irregularity of employment, etc., present considerable difficulties. We should, therefore, be satisfied with an index-number which takes into account the average earnings (money wages) of the whole body of workers per hour.

**International Index Number :** In the modern economic world various articles flow between one country and another. For each country, therefore, there is an index which may be called the International index made up of the principal standardised commodities—mainly raw materials, in which there is an international market and weighted by reference to the importance of these commodities in the trade of the country in question.

In an open international system, the price of every constituent of such an international index, it should be noted, must be the same for all countries, if it is reduced to terms of the same currency, after, of course, allowances are made for tariffs and cost of transport.

## CHAPTER 27

### THE VALUE OF MONEY : THE QUANTITY THEORY OF MONEY

**The Quantity Theory of Money :** Money, we have seen, does not have any intrinsic value of its own. It is valuable because it buys goods and services. The value of money, in other words, is expressed in terms of the goods and services it buys. A unit of money is more or less valuable according as the amount of goods and services which can be exchanged for it is large or small. The Quantity Theory, one of the earliest theories about the value of money, states that the value of a unit of money varies directly with the number of units of goods and services in existence and inversely with the number of units of money in existence. There exists, thus, a close connection between the changes in the general level of prices and the changes in the quantity of money—the former depending on the latter. At any given time, the aggregate volume of goods and services exchangeable for money is fixed ; the demand for money, therefore, is constant. An increase or decrease in the supply of money will, therefore, only lead to a rise or a fall in their prices, that is, in other words, a fall or a rise in the value of money.

In its most rigid form, the Quantity Theory of Money states that there exists an exact inverse relationship between the value of money and its quantity. That is, in other words, a given percentage increase or decrease in the quantity of money will lead to the same percentage rise or fall in the general level of prices.

**Criticism :** The Quantity Theory<sup>6</sup> in its earliest form has, however, been discarded as being 'crude' and 'least accurate'. Besides, there are certain obvious defects from which the theory suffers. For instance, in the first place, the theory assumes that the elasticity of demand for money, in terms of other

things, is always equal to unity and the 'demand curve' for money, also does not change. That is, the general level of prices will be doubled or halved if the quantity of money is doubled or halved—so that the purchasing power of the total amount of money in existence would always be the same. But does this assumption always correspond to reality? Obviously not. For, frequent changes do take place in the demand for money leading thus to considerable changes in the prices even if the quantity of money remains constant. Any considerable change in the quantity of money, again, is likely to cause a change in the demand for it, that is, in the total purchasing power of the total amount of money in existence. The German inflation after the first Great World War (1914-18) provides an illustration. During those years, the quantity of money was increasing and the prices, too, were rising. But the people apprehended continuation of this movement and hence, their demand for money declined. Instead of holding marks, they tried to convert them into durable goods, shares, foreign exchanges etc. Consequently, owing to the general belief that prices would continue to rise, the prices in fact rose at a rate faster than the increase in the quantity of money. Similarly, during depressions, prices fall as a result of an increase in the demand for money rather than a decrease in its supply.

Thirdly, it is just possible that every one who wants to sell goods may not be able to sell at a higher price just because there is more money in existence.

The theory also ignores the important fact that an increase in the quantity of money may cause, under certain circumstances, an increase in the production of goods *e.g.*, when loans in the form of created cheque-book money are utilised to purchase raw materials or to make payments to workers.

The Quantity Theory in its rigid form, therefore, is no longer accepted. It has, however, been expressed by some writers in a more scientific way—by taking into account changes in other influences as well as in the quantity of money.

**Fisher's Formula : The Equation of Exchange:** Whenever goods are sold, they are obviously exchanged for a certain sum of money. During a given period of time, a number of such transactions take place and money is exchanged against commodities. But the sales and purchases must always be equal. The total value of all those things which are exchanged for money, therefore, obviously will be equal to the sum of money given in exchange of them. Prof. Fisher has tried to explain the Quantity Theory with the following Formula.

By T, the volume of transaction, Fisher refers to the total quantity of goods exchanged against money during a given period of time. P denotes the general level of prices at which these transactions take place. It follows, therefore, that P multiplied by T is equal to the total value of all these transactions.

PT i.e., the total value of all these transactions which take place during a given period of time must be equal to the total money payments made during that period. Now, M denotes the total quantity of money in existence. But it is quite likely that during the period in consideration, some of the units of money "skip easily from one person to another" and discharge a number of separate transactions. The frequency with which these units of money change hands, that is, the average velocity of circulation has also to be taken into account. V stands for this average velocity of circulation, that is, the average number of times which a unit of money changes hands during the given period in question. The total value of money payments for all these transactions during the period will, therefore, be equal to M multiplied by V, that is, MV. Fisher's Equation of Exchange thus tells us that  $MV = PT$ . This, in other words, simply means that the value of what is sold, i.e., PT (Quantity  $\times$  Price) is equal to what is paid for them i.e. MV, the money outlay. The price-level, that is, P, therefore, can be known by dividing MV (the quantity of money multiplied by the average velocity of circulation) by T (the total volume

of transaction). That is,  $P = \frac{MV}{T}$

Now, in any community, besides cash transactions, some credit transactions also take place, that is, credit is used to buy goods and services. The theory, therefore, has been modified in order to take into account the bank deposits and also their velocity of circulation.  $M'$  stands for the volume of bank deposits withdrawable by cheques and  $V'$  for the velocity of circulation of the bank deposits.<sup>1</sup> The price-level  $P$ , therefore,

will be equal to,  $\frac{MV + M'V'}{T}$

The points which should be noted in this connection are, firstly, that it is assumed that during normal period, while the quantity of money changes,  $T$ , that is, the volume of transaction,  $V$  and  $V'$  remain constant. Because  $T$  depends on the volume of production, which, depending as it does, on such factors as supply of the factors of production, their efficiency, etc., does not change with the change in the quantity of money. Similarly, velocity of circulation, that is, the rapidity with which the units of money circulate, depends on the habits of the people and their ways and methods of doing business, neither of which is likely to undergo sudden changes.  $V$  and  $V'$ , therefore, during any given period of time, remain constant. According to Fisher, in the third place, the proportion of the cash reserves to deposits is also more or less constant, that is,  $M'$  bears a constant relation to  $M$ , the quantity of money.

It follows, therefore, that the price-level changes exactly in the same proportion as  $M$ , the quantity of money changes. That is, the general level of prices will rise or fall exactly by the same percentage as the quantity of money increases or decreases. In any given year, if the prices are doubled or halved,

<sup>1</sup>  $V'$  i.e., velocity of circulation of bank-deposits can be known by dividing the total volume of bank deposits withdrawable by cheques by the total amount of cheque payments made during the given period in question.



*i.e.*, when compared with what they were a year before, then the equation tells us that either of the three things has happened *viz.*, (i) the quantity of money has been doubled or halved, (ii) the velocity of circulation has been doubled or halved, (iii) the physical volume of transaction has been halved or doubled.

**Criticism :** Fisher's Equation of Exchange, it is said, is a mere 'truism' telling us simply that the means of payment, that is,  $MV + M'V'$  is equal to the total payments that are made, that is,  $PT$ . But the fundamental problem of monetary theory, as has been observed by Keynes, "is not merely to establish identities or statical equations relating *e.g.*, the turnover of monetary instruments to the turnover of things traded for money. The real task of such a Theory is to treat the problem dynamically."

Secondly, the four elements in the Equation, *viz.*,  $M$ ,  $V$ ,  $T$  and  $P$ , are inter-related. It is not correct to assume that  $V$  and  $T$  are independent of  $M$  and  $P$ , and that  $M$  alone will change and cause a corresponding change in  $P$ , the price-level. For, a change in  $M$  is sure to cause changes in  $V$  as well as in  $T$ , *i.e.*, the velocity of circulation and the volume of transactions. Similarly, a change in  $P$ , under certain circumstances, may lead to a change in  $M$ . Nor, again, as Fisher assumes,  $M'$  bears a constant relation to  $M$ . Again,  $V$  is neither independent of other factors in the equation nor is constant. It is not an independent variable. It varies, as Pigou has observed, with the volume of trade and the price-level. It is also affected by changes in the volume of money. The assumption, that is to say, that other things are constant is unrealistic because other things do not remain constant and variation in one factor is likely to influence the other factors too.

Thirdly, it is pointed out that Fisher's Equation seeks to establish a direct causal connection between the total stock of money, its average velocity of circulation, the total volume of trade and the general level of prices but seems to overlook the fact that "it is only through many single price-making processes

that the monetary factors can influence the economy. The equation of exchange is incapable of expressing the changes in the structure of *relative* prices caused by monetary factors. These changes, and especially the disproportionate variations of different prices, may be of much greater importance than the variations of the general price-level."<sup>1</sup> It is, therefore, not correct to assume, as the Quantity Theory does, that a change in the quantity of money leads to an exactly proportionate change in the price-level. An increase in the supply of money may not even lead to a rise in prices if there are unemployed resources.

Fourthly, Fisher's Quantity Theory seems to ignore the element of time that is inherent in the equation. As has been observed by Prof. Mitchell, money payments of a given period are not entirely related to the transactions of the same period. Some of the current payments at least relate to those transactions which took place some time in the past and not to current transactions. This objection becomes more important when the period for which the equation is taken is shortened. In other words, Fisher's equation is more valid for long than for short periods.

Finally, it is pointed out that most of the transactions included in  $T$  are industrial, commercial and financial transactions. The transactions which relate to the purchase of goods and services for final consumption constitute only a small fraction of the volume of transactions included in  $T$ . The Equation of Exchange of Fisher, therefore, does not measure the purchasing power of money but gives us the value of money in terms of a unit of transactions. It does not, that is to say, give us the value of money in terms of a composite unit of consumption goods and services.

It, therefore, measures what is said to be the Cash Transactions standard and not the purchasing power of money.

<sup>1</sup> Halm—Monetary Theory, p. 23.

We should, therefore, err if we over-rate the importance of the equation of exchange. Nevertheless, it is true that the equation does serve as a "rudimentary outline of the problems involved." But our object is not only to analyse the determination of the purchasing power of money but also to analyse the various ways in which money influences the economy.

**The Cambridge Equation :** The Cambridge economists have given another version of the Quantity Theory of Money. The Cambridge Formula considers not the flow of money and of goods as does Fisher's formula. Instead, it considers the stock of money which the people wish to hold at any given point of time. The demand for money, that is to say, does not depend on the volume of goods and services to be exchanged for money but on the ability and willingness of the people to hold currency, just as the demand for houses comes ultimately not from the persons "who buy and re-sale or lease and sub-lease houses, but from the persons, who occupy houses."

Now, why people wish to keep a stock of money, that is, wish to keep a certain portion of their income, either in cash or in bank deposits? Because, liquid resources over which they have ready command have certain advantages over illiquid resources, *i.e.*, over which they have no ready command. The fraction of their income which the people desire to hold in the form of currency depends on several factors. For instance, they may desire to keep money in order to bridge over the gap between the time when they receive money and the time when they pay it away. Individuals, as well as, firms, keep a stock of money to bridge over the time interval between receipts and payments. Secondly, the speculative motive may also prompt people to keep a stock of money. They may, that is to say, expect a fall in prices and so may hold money to buy goods later at lower prices, instead of spending it in buying goods now by paying higher prices. Finally, people may keep a stock of money for sudden contingencies. The total

amount of currency held in these ways constitutes the demand for money at any given point of time.<sup>1</sup>

To take an illustration : Suppose that a community's annual real income is 1000 bags of cement and it chooses to keep a money stock equal to half its annual real income. Obviously, the total quantity of money will be worth 500 bags of cement. That is, if the quantity of money consists of, say, 1000, one rupee notes, then Re. 1 will be worth half a bag of cement and the price of cement will be Rs. 2 per bag. That is, if the community chooses to keep a store of money equal to half its annual income, then the actual quantity of money in existence will have that value and each unit of money will have its proportionate value.

Algebraically, the Cambridge Formula is explained in the following way :

Let R stand for the community's annual real income ; k—for the proportion of its income that the community desires to hold in money ; M—for the number of units of money in existence. Then, kR will be the value of the total quantity of money, that is, M. The value of one unit of money, therefore,

will be  $\frac{kR}{M}$

Now, the value of one unit of money is the opposite of price-level ; that is, when prices rise, the value of money falls and when the prices fall, the value of money rises. We, therefore, find out p, the price-level, when we turn upside down the

value of one unit of money, viz.  $p = \frac{M}{kR}$

**Criticism :** The Cambridge School errs in that it takes into consideration community's total resources. But, what we

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<sup>1</sup> This conception of demand for money, however, is not a new one. The Cambridge School only developed the idea which is an old one and, as has been shown by Marshall, can be found in the works of earlier writers like, Petty, Locke and Cantillon.

are concerned most with is the purchasing power of money. It is, therefore, necessary to take into consideration only the income-deposits, that is, only a fraction of the total resources of the community and not the total resources which consist of Income, Business and Savings deposits. The chief inconvenience of the Cambridge Equation, observes Keynes, "lies in its applying to the total deposits considerations which are primarily relevant only to income deposits and in its tackling the problem as though the same sort of considerations which govern income-deposits also govern the total deposits."

Secondly, the equation does not help us in understanding the important fact that, besides monetary factors, there are a number of non-monetary factors, *e.g.* the relation of savings and investments, etc., which do influence the fluctuations of prices.

**Keynes' Version :** In his *Tracts on Monetary Reform* Keynes observes that the quantity of cash is equal to the price per consumption unit multiplied by the number of consumption units and has given the following formula :  $n = p (k + rk')$ ,

that is,  $p = \frac{n}{k + rk'}$ , when,  $n$  stands for the quantity of cash,

that is, the total quantity of currency in circulation ;

$p$  stands for the price per consumption unit ;

$k$  stands for the number of consumption units which the public choose to hold in the form of cash ;

$k'$  stands for the number of consumption units held by the public in bank deposits *i.e.*, withdrawable by cheques ;

$r$  stands for the proportion of the cash reserves held by the banks against their deposits.

In Keynes' formula  $n$ , it should be noted, is not the total money but that part of it which is kept by the public for ex-

penditure on consumption and by the banks as cash reserves against those deposits intended to be spent on income goods. In other words,  $n$  does not include the currency and bank deposits designed for capital transactions. The formula of Keynes differs from the formula of Fisher in that the latter considers all transactions and not exactly the purchasing power of money as implied in the Consumption Standard.

Keynes' formula has, therefore, the merit of focussing attention on the fact that the price-level depends on the people's habits about holding a proportion of their money incomes in the form of readily available cash. It is an improvement upon Fisher's formula in that it is concerned with the purchasing power of money and quantity of cash and not with the general price-level or the total volume of money or total resources. But there are defects too. For instance, the assumption that cash deposits are held by the people for consumption only is misleading. For, the people hold these cash deposits for various other purposes also, *e.g.*, business and other personal purposes. It is only a fraction of these deposits which is used for consumption purposes. Again, how can the magnitudes of  $k$  and  $k'$  be precisely determined? Calculation of their magnitudes with any amount of accuracy is extremely difficult.

**Limitations of the Quantity Theory :** The two equations, Fisher's and the Cambridge one, it should be remembered, are only two versions of the Quantity Theory of money, having no fundamental difference between them. The former, that is, Fisher's equation is concerned with the average value of money during a period of time, the amount required by the community to finance its transactions, during a given period of time, that is, with the value of "money on the wing", as Robertson puts it, and the latter, that is, the Cambridge equation, is concerned with the value of money at a given moment of time, or the amount of money which the individuals hold in balance at any given time with a view to finance their future transactions, that is, with what is called by Robertson, the value of "money sitting."

The Quantity theory, that is, either of these two formulas, has certain limitations. It can explain, "the 'How it works' of fluctuations in the value of money and in the activity of industry. But it can't explain the 'Why it works' except in the long period and in those exceptional short period fluctuations that are manifestly due to large-scale creations or contractions of money."<sup>1</sup> It fails to explain the reason why "a creation of money will sometimes 'take' and start off a rise in prices, while at another time an equal creation may have no effect at all." True, that there have been occasions when a refusal to allow expansion in the quantity of money has brought about a fall in prices. But it is equally true that on several occasions an increase in the supply of money with a view to raise prices has failed, there being 'no takers' ! The Quantity Theory, in other words, fails to explain the changes in the price-level which occur during a trade cycle. For instance, after 1929 depression, an increase in the quantity of money could not check, as, according to the Quantity Theory, it should have checked, the downward trend of the prices. Increased quantity of money did not succeed in raising the prices. "The horse," as observes Crowther, "can evidently be stopped from drinking, but no amount of leading him to the water will make him drink if he is not thirsty."<sup>2</sup> Creation of money, unaccompanied by the willingness of the public to spend it, will only result in piling up of idle money. Similarly, the post-boom recession is not always due to the dearth of supply of money. The upward movement of prices may be checked much in advance, that is. much before there is any dearth of the purchasing power in the country. The Quantity Theory is, therefore, an 'imperfect guide to the causes of trade cycle.' Neither the end of a depression nor the beginning of a recovery can be said to be due to causes operating on the monetary side alone. "Shortage of money may cause the recovery to turn into depression. But it is not the sole cause, and depression, may begin when there is no shortage of money.

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<sup>1</sup> Crowther—An Outline of Money, p. 123.

<sup>2</sup> Crowther—Op. Cit., p. 124.

It may be that really gigantic creations of money will do the trick. This may be the explanation of why money-creation puts up prices in war time but not in depressions. But the explanation is more likely to be that there is a public willingness to spend the new money in war time but not in depression. And, in any event, lesser measures of money-creation may be quite impotent."<sup>1</sup> The quantity of money, though it seems to be the dominant influence on the price-level on the average of long periods, it may or may not control the movements of prices in the short period of the trade cycle.

In times of depression, it may be noted, what is lacking is not so much money as peoples' income. "What is manifestly lower at the bottom of a slump than at the top of a boom is not the quantity of money but the total of individual incomes. If people had the incomes they would use the supply of money actually and potentially in existence; the velocity of circulation would increase and prices would rise. It is because money is not paid out in incomes that it languishes in stagnant pools." The value of money, that is to say, is a consequence of the total of incomes rather than of the quantity of money.

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<sup>1</sup> Crowther—Op. Cit., p. 117.



## CHAPTER 28

### CHANGES IN THE VALUE OF MONEY : THEIR EFFECTS ON PRODUCTION AND DISTRIBUTION

A fall or a rise in prices, that is, in other words, a change in the value of money results in a transfer of income from one set of people to another. Rising prices, for instance, stimulate production and increase employment and profit, and falling prices, on the other hand, unaccompanied by corresponding fall in the costs of production, result in declining profits, and increasing unemployment. Both, that is, rising or falling prices thus react on production and distribution. It is, therefore, important to study carefully the effects of any change in the value of money on the economy of a country. We should, therefore, devote a chapter in studying what is meant by Inflation, Deflation and Reflation and the effects of each on the economy of a country.

**Inflation and Deflation :** By inflation or deflation we mean an expansion or contraction of total effective means of payment, however caused, in relation to the work that this money performs in effecting the exchange of goods and services.

Inflation and deflation, thus are monetary terms and refer to the movements of prices. Inflation is usually associated with increasing activity and employment and is reflected in an upward movement of the general level of prices, (that is, the value of money falling) and the deflationary situation is generally associated with decreasing activity and employment and is reflected in a downward movement of the general level of prices (that is, the value of money rising). It should, however, be noted that such association is not necessarily indispensable. In other words, there may be increasing activity and employment without inflation or inflation without such increasing activity and employment<sup>1</sup>.

<sup>1</sup> The position in Germany during the inter-war period may be described as "inflation without recovery."

In other words, an increase in the quantity of money in itself does not constitute inflation. The prices, for instance, will not rise and, therefore, the value of money will not fall, if the increased supply of money is absorbed by the corresponding increased needs for it. Increase in the supply of money leads to inflation only when there is no such corresponding increase in the need for it. Inflation, again, is said to exist, when, although the costs might be falling, the prices are kept stable. Such inflation—Profit Inflation, as Keynes calls it, existed in U.S.A., during the years 1924-9.

Similarly, there may be falling activity and employment, that is, depression, without deflation or deflation without such falling activity or employment, that is, depression. And also the decreased supply of money in itself need not cause deflation when it is associated with a corresponding fall in the demand for money.

Inflation and deflation have thus to be understood with reference to the relationship of prices to the costs of production. Inflation or deflation is said to exist when the prices and the costs are such that businessmen are making more than normal profits or less than it (or even incurring losses).

“The only meaning which can be given to the term inflation is” observes Gayer, “capital overexpansion induced by excessive profits, current or prospective. A credit expansion sufficient to keep prices stable when productivity is increasing can only be healthy if monetary costs are also rising quickly enough to keep profits in check”.<sup>1</sup>

**Types of Inflation :** Different writers have defined inflation in different ways. A study of the types of inflation may, therefore, help us to understand the different senses in which the term has been used or understood.

J. M. Keynes, in his *Treatise on Money*, has distinguished between four types of inflation *viz.*, (i) Commodity Inflation

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<sup>1</sup> A. D. Gayer—*Monetary Policy and Economic Stabilisation*. p. 110.

(ii) Capital Inflation (iii) Profit Inflation and (iv) Income Inflation.

Commodity inflation (or deflation) is said to exist when the cost of investment is in excess over (or less than) the volume of saving. In the words of Keynes, by Commodity inflation or deflation is meant, "the excesses or defects in the cost of investment over the volume of saving." Prices rise or fall, when there is commodity inflation or deflation, out of proportion to the increase or decrease in the costs of production.

Capital Inflation (or deflation) means a rise or a fall in the price-level of new investment goods relatively to their cost of production. Just as the commodity inflation measures the change in the price of liquid consumption goods, relatively to their cost of production, so the capital inflation measures the change in the price of capital-goods, relatively to their cost of production. Capital inflation or deflation, however, does not *as such* affect the purchasing power of money, because the cost of investment is unaffected by it. "The significance of capital inflation or deflation in its influence on the purchasing power of money lies in the fact that its presence is almost certain, sooner or later, to affect the output of capital-goods, and hence to produce Commodity Inflation or Deflation."<sup>1</sup>

Profit Inflation (or Deflation) refers to the situation when there is a rise or a fall of the total profits above or below zero due to an inequality between saving and the value of investment.

Income Inflation (or deflation) refers to a situation when there is a rise or a fall in the rate of earnings per unit of output, that is, the rate of efficiency earnings.

**Pigou's Views :** Inflation, according to Prof. Pigou, exists "when money income is expanding more than in proportion to income-earning activity."<sup>2</sup> Money income depends on

<sup>1</sup> Keynes—Treatise, Vol. I., p. 156.

<sup>2</sup> Economic Journal, Dec. 1941.

(i) the stock of or the volume of money and (ii) on the proportion that the people maintain between their money-incomes and money balances. So long, that is to say, as there are unemployed factors of production, an increase in the supply of money will, by lowering the rate of interest, stimulate investment and will thus bring these unemployed resources under productive activities. Increase in money-income, therefore, will be balanced by the corresponding increase in the volume of production of goods and services. Once, however, the stage of full employment is reached, any more increase in the money-income resulting from an increase in the supply of money will lead to inflation, since, increase in the supply of money will no more be able to increase the volume of employment or income-earning activities, or of output, but only will lead to a rise in the level of prices of output, that is, to inflation.

War inflation, according to Pigou, may be of two types, *viz.*, (i) Wage-induced or (ii) Deficit-induced. Inflation is said to be wage-induced, if the wage-earners, because of the rise in general prices and cost of living during war resulting from diminished productivity of factors of production due to war situation succeed in forcing the employers to pay higher wages. The new money that has to be created to meet the demand of the labourers, will obviously lead to inflation, since the output will not increase correspondingly to the increase in their money incomes. Inflation is said to be deficit-induced, when the prices rise because government takes recourse to deficit financing. That is, if during the war the government does not succeed in mopping up the surplus purchasing power in the hands of the people (their money-incomes during such times increase more than the increase in the volume of output) by taxing or inducing them to give loans or if the expenditure is more than the proceeds of taxes and loans, it has to take recourse to create new money to meet the deficit in the budget. This leads to rise in prices and money-incomes.

**Semi-inflation and True inflation :** Keynes has made a distinction between what he says, Semi-inflation and True in-

flation. It is possible that so long as there are unemployed resources of every type, general level of prices will not rise very much as the output increases. But, sooner or later, as the output increases, a series of 'bottle-necks' will be successively reached, that is, the supply of particular commodities will cease to be elastic and, therefore, their prices will rise to whatever level is necessary to divert demand into other directions.<sup>1</sup> 'Partial inflation,' therefore, may be found even there are some unemployed factors of production, because of these 'bottle-necks'. An increase in effective demand in terms of money, before the state of full employment is reached, will spread itself partly in increasing employment, and partly in increasing the costs and hence, the prices. This is, what is called by Keynes, Semi-inflation.

When, however, there is no further unemployed resources, that is, when full employment is reached and a further increase in the quantity of effective demand, therefore, produces no further increase in the output, but "entirely spends itself on an increase in the cost unit, fully proportionate to the increase in effective demand, we have reached a condition which might be appropriately designated as one of true inflation."<sup>2</sup> True inflation thus, according to Keynes, only comes after the stage of full employment of factors of production is reached.

Inflation is said to be galloping when the prices rise very rapidly because of the creation of new money by the government on a very large scale. In times of galloping or hyper-inflation, the purchasing power of money may decrease indefinitely while the face value of money remains the same, and debtors may discharge their debt obligations at a small fraction of their pre-

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<sup>1</sup> "If there is a perfect balance in the respective quantities of specialised unemployed resources, the point of full employment will be reached for all of them simultaneously. But, in general, the demand for some services and commodities will reach a level beyond which their supply is, for the time being, perfectly inelastic, whilst in other directions there is still a substantial surplus of resources without employment."—(Keynes—General Theory, p. 300).

<sup>2</sup> Keynes—General Theory, p. 303.

vious value in terms of purchasing power. And such an inflationary process may ultimately lead to the repudiation of money by the people in spite of its legal tender quality. There may be, that is to say, a flight from money to goods, as it happened in Germany after the First Great War.

Inflation, again, is said to be 'suppressed' when, in order to check a rise in prices, the governments by such measures as rationing, price control or controlling the flow of investment etc., prevent the public from spending their money incomes and thus prevent a rise in prices. Such a policy, obviously prevents a rise in prices but leads to an "accumulation of cash, bank balances and other forms of encashable private wealth in the hands of the people." This is said to be suppressed inflation.

**Reflation :** Attendant evils of deflation, we have seen, are fall in prices, depression in trade and industry and unemployment. Such a state of affairs is obviously undesirable. When with a view to remedy these ills recourse is had to inflation, *i.e.*, raising the prices in order to bring them in equilibrium with the level of costs, it is known as Reflation.<sup>1</sup>

**Dangers of Inflation and Deflation : Their effects on Production and Distribution of Wealth :** Neither rising prices nor falling prices, that is, neither inflation nor deflation as such is conducive to the economic progress of any community. Each is attendant with grievous evils, if carried to extremes. It is, therefore, necessary to be vigilant so that neither creeps in in any disguise or form and causes injury to the economic sys-

<sup>1</sup> **Disinflation :** The desirability of bringing down prices and costs to reasonable levels has been felt by every government which suffered from the consequences of the staggering rise in the prices and costs during and after the war. The policy which aims at bringing down the prices and costs by properly adjusting the fiscal and the monetary policies, but without curbing either the output or the volume of employment, is known as Disinflation. Disinflation, however, is not the same thing as deflation. Deflation implies a decline in money income relatively to the volume of output. It is characterised by a fall in employment, in prices and in output.

tem, which, in other words, means injury to the community as a whole.

Inflation or deflation results in transfers of wealth from certain income groups to certain other income groups. Each, therefore, alters the distribution of wealth in the community and since the community is composed of different groups of people, some having fixed income while others have variable income, some are creditors while others are debtors, etc., neither inflation nor deflation, can have similar effects on these different groups of people. We should, therefore, study the effects of each on Production and on Distribution.

**Inflation or Deflation and Production :** Inflation or deflation, that is, rising or falling prices affect production and the volume of employment in different ways. A period of rising prices, we have seen, is associated with expanding production and increasing employment. Rising prices, specially after depression, resulting from currency expansion, obviously encourage productive activity and increase the volume of output and employment. Lure of large profits stimulates productive activity unduly. Businessmen, because of their optimism, invest more and produce more. But the process cannot continue indefinitely. Undue expansion has its shortcomings too. For, incapable businessmen, who would otherwise be driven out by forces of competition exist during the periods of rising prices. Inflation also encourages speculative activities which certainly do not increase either the productivity or the real income of the community. The cumulative effect of all these activities is disastrous. For, ultimately the bubble is sure to burst. Gradually, the flexible cost elements will overtake the fixed selling prices. Prices and wages will rise without corresponding increase in the volume of output or employment. On the one hand, the supply of goods will exceed the demand, *i.e.*, will be more than can be sold at a profit. On the other hand, people, specially those with fixed incomes, will curtail their volume of purchases. On top of these, the speculative activity will increase. At last the bubble bursts. The

banks become doubtful and hence, refuse to increase their loans any more. Businessmen curtail their production. Un-sold goods are piled up. Prices fall, the businessmen incur losses. Unemployment increases. In short, the community suffers all the ills of a deflationary situation.

While inflation or the period of rising prices is associated with increasing productive activity and volume of employment, deflation or a period of falling prices is associated with decreasing activity and decline in the volume of employment. Falling prices imply declining profits and if the prices fall more than the costs—then the profits may well turn into losses.

It is, however, true that just as a mild dose of inflation is likely to stimulate productive activity and hence, may at times be considered desirable, so also deflation, may eliminate some inefficient producers who in the periods of rising prices exist and earn profits.

**Inflation or Deflation and the Distribution of Wealth :** Inflation or deflation, as we have observed before, results in transfers of wealth from certain groups in society to certain other groups. Neither, therefore, has similar effects on every individual in a society. Rising or falling prices, that is to say, affect different groups in society in different ways. Inflation, for instance, affects the wage-earners unfavourably, while the employers make abnormal profits when the prices rise. Wages are proverbially sticky and are unlikely to rise at least as fast as the prices do during the periods of inflation. Hence, the money wages the labourers get, buy less goods and services for them and they thus become poorer to the extent they have to forego consumption because of a rise in the prices. The employers, however, gain during the periods of rising prices. They make large profits, firstly, because the prices rise more than the costs do, and secondly, they might have purchased raw materials earlier at a lower price or contracted labour at a lower rate of wage, and hence, when they sell the finished goods at a price higher than what they had expected at the time



of buying the raw materials or contracting labour at low rates, large unexpected profits accrue to them.

One thing, however, should be noted. The wage earners, we have seen, suffer during the periods of rising prices because their real wages become low. But the lure of profit induces businessmen to increase their activity. Hence, more labourers get employment. In other words, when the prices rise, the working class, that is, the wage earners, as a class gain in the sense that they get more employment which, otherwise, they would not get. Conversely, when the prices fall, the profits vanish, the businessmen incur losses and contract their activity—both production and the volume of employment decline. Hence, although their real wages increase during the period of falling prices, because of the increased unemployment which results, the wage-earners as a class earn less money wage and thus suffer.

Inflation or deflation, again, affects individuals in their capacity either as debtors or as creditors. Money buys more or less as the prices fall or rise. An individual, if he is a debtor, loses while the prices fall, because although he repays the same amount of money he borrowed, in reality, he returns a higher value in terms of commodities, for money now buys more. Conversely, he gains while the prices rise, for, now in repaying the same amount of money he had borrowed, he returns less in terms of commodities, because, the purchasing power of money has now fallen and so money buys less.

If, on the other hand, the individual is a creditor, he stands to lose while the prices rise and gain while the prices fall. For, in the first case, he gets back less in terms of commodities and in the second case, more in terms of commodities.

**How to Combat the Evils of Inflation or Deflation ?**  
The situation becomes inflationary or deflationary according as the prices rise more than the costs or fall below the costs, yielding, therefore, surplus to the producers or resulting in loss for them. There would, therefore, be neither inflation nor defla-

tion if the prices could be kept at a level equal to the level of the costs.

Inflation or the expansion of currency forces up the prices because the volume of output does not increase as fast as the currency expands. It is, therefore, possible to control inflation either by fiscal or by monetary policy or by both.

By suitable fiscal policy the volume of expenditure on goods by individuals can be checked. The government, for instance, may increase the rates of taxes, both direct and indirect, so that, the individuals will be forced to curtail their expenditure on consumption, since they will now have less money with them after paying the taxes at higher rates. Similarly, by raising the rate of interest or by adoption of other methods of controlling the credit, the government may succeed in checking private investment as well as expenditure and thus may bring down the price-level. In case of severe inflation, besides raising the discount rate and controlling the volume of credit and investment, the government may adopt the policy of currency freeze or may, if it considers necessary, convert the old note issue into a new note issue at a very small fraction of the nominal amount of the notes, and thus establish a new monetary system altogether.<sup>1</sup>

Periods of deflation are periods of falling prices and increasing unemployment. Deflation, on the one hand, discourages enterprises and thus discourages production and in-

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<sup>1</sup> Similarly, such measures as price control, rationing, etc., though cannot be said to be measures which will cure inflation, still may be adopted in order to prevent the individuals from spending their surplus income. But such measures will lead to accumulation of large liquid balances. With a view to control the spending of these assets, governments of many European countries (e.g., Belgium, France, Denmark, etc.) adopted the policy of blocking these liquid assets. Measures were taken by these governments to block the bank deposits and the depositors were allowed to withdraw only such part of their deposits as were desired by the governments. In some cases, where notes were issued in large numbers during the war, the governments actually issued new notes each of which replaced several old ones and thus an altogether new currency system was introduced by these governments.

creases the burden of all debts including the national debt. On the other hand, it benefits such people as holders of national debt, etc., that is, the 'non-producers' at the expense of the active elements of the state. During such periods of falling prices, the government should itself undertake the Public Works Programme and such other measures, fiscal or monetary, as will stimulate productive activity and hence, increase employment.

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## CHAPTER 29.

### MONETARY SYSTEMS : THE PROBLEM OF THE STANDARD

Under any conceivable form of economic organisation some kind of monetary system is inevitable—a fundamental necessity. The need of a sound monetary system for every country is all the more to-day because of the innumerable social, political and economic problems crying for immediate solutions. The failure of the monetary system to function smoothly will mean business instability, and ultimately, may lead to altogether economic collapse. Much, therefore, depends on the satisfactory solution of the problem of the Standard which, though, for a long time past has been engaging the attention of financial authorities of the world, still remains to be solved to their complete satisfaction.

There are various systems of metallic currency. In the following paragraphs we have briefly discussed these systems.

**Monometallism :** A monetary system is known as Monometallism, when one metal is used as the standard of value. The standard money, under such a system, that is to say, is composed of one metal, either gold or silver. The system will be Gold standard or Silver standard, according as the metal of which the Standard money is made, is gold or silver. Before the First Great World War, England and China had Gold and Silver Monometallism respectively.

In a Monometallic system, therefore, the monetary authorities will buy or sell the money metal (gold or silver) at fixed price in unlimited amounts and the value of the metal (gold or silver), therefore, will be same as 'money' or as 'commodity.'

Besides simplicity, which is claimed to be an advantage of Monometallism over Bimetallism, advocates of Gold Monometallism hold that both domestic price stability and stability of international exchange can be secured by this system better than by any other system.

**Bimetallism :**<sup>1</sup> Bimetallism or the use of two metals, *viz.*, gold and silver, has attracted support of monetary authorities for decades past as a system useful for avoiding the shortage of gold and for stabilising its value.

The essential features of bimetallism are the following : Two metals, gold and silver, are adopted as the standards of value. The standard money, that is to say, is composed of gold as well as of silver. Secondly, both these metals are unlimited legal tender and both are freely coined at a fixed ratio of exchange between them. The monetary authorities, when there is bimetallism, should be ready to offer, without limit, gold for silver and also silver for gold, whenever so desired, at the legal ratio fixed by them.

**Case for Bimetallism :** Advocates of bimetallism maintain that the monetary system in which two metals are used concurrently as the monetary base secures a more stable standard of value, and also more stable prices than does a system in which only one metal is adopted as the standard of value, that is, monometallism. Greater stability is secured, because, firstly, the total stock of money, when two metals are used, is obviously larger than when one metal is used as standard of value, and therefore, any addition to the total stock of money will affect the value of money and the price-level

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<sup>1</sup> In England, until 1717, there was a silver standard although gold coins also circulated and in that year bimetallism was introduced there. But later in the year 1816 it was abandoned. France and several other countries in Europe adopted bimetallism in the middle of the 18th century. America had a bimetallic standard since 1792 till the year 1900. The Latin Union consisting of France, Belgium, Switzerland and Italy (and later joined by Greece) was formed in 1865. The Latin Monetary Union, not only fixed a ratio between gold and silver coins, but also adopted a common currency unit for all these countries forming the Union. Bimetallism was, however, abandoned by the Union in 1873.

There have always been some enthusiastic supporters of bimetallism on an International scale. But the two very important monetary conferences *viz.*, the Paris Conference of 1878 and the Brussels Conference of the year 1892 failed to bring about an international agreement on bimetallism. The idea, however, had always the support of U.S.A., while England opposed it.

much less than it would, under monometallism. Secondly, it is argued that the value of money and the general price-level are likely to be steadier under bimetallism than under monometallism, because, an increase or a decrease in the output of one metal will often be counteracted by a decrease or an increase in the output of the other metal.

Under bimetallism, it is further pointed out, the total stock of money being larger and there being greater likelihood of its increasing more rapidly, the prices of commodities are likely to rise gradually and this will stimulate productive activity. On the other hand, abandonment of bimetallism will result in a fall in the prices and thus would discourage productive activity, as it happened in the Latin Union in 1873, when silver was demonitised and bimetallism abandoned.

Thirdly, bimetallism, it is held, by establishing a stable external value of money between gold-using and silver-using countries, encourages foreign trade and also foreign investment of capital. And this is no small an advantage.

**Case against Bimetallism :** Indeed, for many centuries bimetallism worked fairly satisfactorily and possibly would have worked better had the same ratio between the two metals prevailed in all countries. But when adopted by any country singly, bimetallism, it is pointed out, will combine the worst features both of gold and of paper standards and will, in practice, tend to become either gold or silver monometallism.<sup>1</sup>

<sup>1</sup> It happens thus: The price of bullion, either gold or silver, may fluctuate in the market and it is possible that at some time gold, while, at other time silver, will be more valuable because of the influences of demand and supply and other multitudes of forces which may operate in the market. The market ratio of gold and silver, therefore, may differ from the legal or the mint ratio. These fluctuations in the relative values of gold and silver will obviously react on the monetary standard. Suppose, for example, the mint ratio between gold and silver is 1 : 15, that is, one ounce of gold in coins is equal to 15 ounces of silver in coins. Now, if the market ratio is also the same, that is 1 : 15, people will have preference for neither; they will take both gold and silver to the mint for coinage and both gold and silver will circulate side by side. But if on the other hand, the market ratio is, say, 1 : 16, while the mint ratio remains the same, that is, 1 : 15, people will buy silver

Bimetallism suffers from another defect. When, for instance, there exists any discrepancy between the mint ratio and the market ratio, a great confusion will follow. For, while the debtors will be eager to pay in the depreciated metal, the creditors will insist on payment in the dearer *i.e.*, the over-valued metal. This obviously will lead to great confusion in all business transactions. Besides, it will also encourage unhealthy speculation in the bullion market. (The speculators, with a view to making profit will buy and store the under-valued metal and sell it when the price will rise).

Finally, the advocates of bimetallism maintain that it secures greater stability of prices since the increase or decrease in the output of one metal will very often be compensated by a decrease or an increase in the output of the other metal. But is there any such guarantee that it will be so? Is it not equally probable that the course of production of both the metals may move in the same direction and hence, bimetallism, as it is claimed, may not secure stability of prices! "The defect of this proposal," it has been rightly observed, "is that it is impossible to fix for all time a definite ratio between the values of two metals, each of which is subject to entirely different conditions of supply and demand. The fixed ratio is bound at any time to over-value one metal and under-value the other." <sup>1</sup>

**Compensatory Action of Bimetallism :** If, however, gold and silver are used jointly as a monetary base on an international scale, that is, if bimetallism is adopted internationally

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against gold from the market and exchange it for gold at the mint and thus will make a profit of an ounce of silver from the exchange. If the process continues, eventually, therefore, only silver coins will remain in circulation and gold will go out of circulation. Similarly, only gold will remain in circulation and silver will go out of it, if the market ratio of the two metals be 1 : 14, while the mint ratio remains 1 : 15. For, in that case, people will buy gold against silver from the market and exchange it for silver at the mint and thus make a profit. Hence, bimetallism, it is said, in practice, tends to become either silver or gold monometallism.

Growther—An outline of Money, p. 293.

with a uniform ratio between gold and silver in all countries, then, of course, it would enjoy all the benefits of the gold standard and perhaps would secure greater stability at least in the secular trend of prices than a gold monometallism would. For, in that case, neither metal would succeed in driving the other out of circulation except through a phenomenal change in the relative supply of the two; in other cases, the compensatory action as between monetary and industrial demands would tend to keep both the metals in monetary use. And hence, bimetalism, when adopted internationally, can work at the legal ratio between gold and silver fixed upon by the governments of the countries.

The compensatory action of bimetalism can be illustrated thus: Suppose, for example, that several countries agree to adopt bimetalism and fix the ratio between gold and silver at 1 : 15, that is, 1 oz. of gold in coins is equal to 15 ounces of silver in coins, which is also the ratio prevailing in the market at the time. Suppose, further, that for some reason or other, *e.g.*, finding of new mines, cheap import, etc., the supply of silver increases and, therefore, its price falls in the market, that is, say, for instance, 16 ounces of silver bullion can be had in the market in exchange of 1 ounce of gold bullion. The value of silver, in the form of coins, is now higher than its value as bullion and hence, it is now profitable to turn silver bullion into silver coins. The debtors, too, now will insist on making payments by coining silver, the depreciated metal. Thus, payments now will be made in silver and not in gold. Hence, the demand for silver, the depreciated metal, will increase while the demand for gold will fall. But the increased demand for silver, in course of time, will check the depreciation of its value and its price will tend to rise, sooner or later. Eventually, therefore, by a rise in the price of silver (the depreciated metal) and by a fall in the price of gold, the ratio between gold and silver as bullion will tend to be brought back to the legal ratio between them in the currency, that is, 1 : 15. This is what is known as the compensatory action of bimetalism. This



compensatory action will be more effective when many countries adopt bimetallism at the same fixed ratio and thus larger economic resources be made available to ensure stability.<sup>1</sup>

It thus appears, that although bimetallism is hardly likely to work satisfactorily when adopted by any country singly, it is practicable when adopted internationally, that is, when by joint agreement countries agree to adopt bimetallism at a fixed ratio. Nevertheless, there are certain practical difficulties which we can hardly afford to overlook. For instance, in the first place, the degree of international co-operation which the system would require for satisfactory working is perhaps too much to hope in the present uncertain international situation. Secondly, although, if once established, such a system would secure greater price stability than an unregulated gold standard, and would require less management yet there is no "assurance that it would afford either the degree or kind of stability in the long-period trend which would be desirable."<sup>2</sup> And finally, it is pointed out that whatever its effect on the secular trend of prices, bimetallism "would do nothing in itself to remedy the much greater evils of the shorter period oscillations of activity known as business cycles."<sup>3</sup>

**Gresham's Law :** The disappearance of the full-bodied coins, which during her reign Queen Elizabeth put into circulation with a view to oust the large volume of the debased coins earlier put into circulation by the Tudor kings, puzzled the Queen. At that time, this law, known as the Gresham's Law, was formulated by Sir Thomas Gresham, one of the financial advisers of the Queen, as an explanation of the disappearance of the full bodied coins which were issued in her regime without, at the same time, withdrawing from circulation the existing debased coins.

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<sup>1</sup> If, however, the output of one metal increases continuously leading to a fall in its price continuously then, of course, it will drive out the other from circulation.

<sup>2</sup> Gayer—Monetary Policy and Economic Stabilisation, p. 185.

<sup>3</sup> Ibid—p. 186.

The law formulated by Sir Gresham states that when two kinds of money, one bad, that is, inferior or cheaper in substance value, and the other good, that is, new and full-bodied coins are in circulation at the same time, then the good money will be driven out and only the bad money will remain in circulation. "Bad money" the law states, "tends to drive good money out of circulation, when both of them are full legal tender."

How, in practice, does bad money drive out good money of circulation ? <sup>1</sup> Good money is driven out in several ways. For instance, when people want to hoard money, say, for future contingencies etc., they will hoard the good money and not the bad money. A portion of the good money thus is driven out of circulation. Similarly, new or full-bodied coins are naturally preferred when the object is to obtain the metal by melting the coins. The jewellers, for instance, will melt new coins and thus obtain more metal for making ornaments rather than melting the old coins from which they will get lesser amount of bullion. Finally, the good money disappears through the payments made to the foreigners. The foreign creditors are interested not in coins but in the value of the bullion contained in them. Hence, for making payments to the foreign creditors good money will be used in preference to the bad money since a smaller number of good coins containing more bullion would be required for making such payments.

These are, then, the ways by which bad money drives out good money when both good and bad money are in circulation in any country.

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<sup>1</sup> Bad money, it should be noted, does not mean counterfeit coins. It refers to those moneys which are considered as inferior or cheaper in substance value. When, for instance, coins and paper currency are in circulation, the coins are regarded as good money while the paper money is regarded as bad money because it is cheaper in substance value. Similarly, when two coins of the same metal, either of gold or of silver circulate, but one is new and the other is old and worn out, the new coin is regarded as good money while the old and worn out coin is regarded as bad money.

**Limitations :** Now, does the bad money always succeed in driving out the good money of circulation ? Obviously when people are more interested in the specie, that is, the metal, they will prefer new coins for hoarding, melting or for making payments to foreigners and thus good money will go out of circulation.

Nevertheless, the law has certain obvious limitations too. For instance, when the total amount of money in circulation—both good and bad, is insufficient for the needs of the people, bad money cannot drive out good money of circulation. In that case, both good and bad money will circulate, concurrently. Secondly, what happens if the people refuse to accept bad money ? Suppose, for example, that the government issues inconvertible paper money which the people refuse to accept considering them to be much depreciated in value and insist on having gold. Obviously, the law will not operate in this case, rather, the contrary will happen, that is, the good money will, in this case, drive out the bad money, *i.e.*, the depreciated paper money.

**Bimetallism and Gresham's Law :** Under a bimetallic system, that is, when coins of two metals, gold and silver, are in circulation and each is freely minted and unlimited legal tender, if the market ratio between the two metals differs from the mint ratio, then the over-valued metal, (that is, the metal which is over-valued at the mint, in other words, the bad money), tends to drive out the under-valued metal (under-valued at the mint) of circulation.

Suppose, for example, that one gold coin containing 1 oz. of gold is equal to 16 silver coins, each containing 1 oz. of silver, that is, the legal ratio between the two metals, gold and silver, is 1 : 16. Suppose, further, that in the market the price of silver falls, so that, in the market one ounce of gold can be exchanged for, say, 17 ounces of silver. Now, silver, since it has a higher value as coin than as metal, is

bad money, and hence, will drive out gold, the good money, of circulation because people now will be interested in withdrawing gold coins which have higher value as metal than as coins from circulation and exchange them for obtaining 17 ounces of silver (for each) in the market. Gold, thus, will go out of circulation and silver, the bad money, will remain in circulation.

**Symmetallism :** Bimetallism, we have seen, has serious limitations and it is unlikely that over a period of time the mint and the market ratio of the two metals will remain unchanged. The fixed legal ratio is bound at any time to over-value one metal and under-value the other, and ultimately to lead to monometallism. In order to get round this difficulty, nearly half a century ago, Marshall suggested a variant, which he called 'symmetallism'. The currency, under such a system, would neither be backed by gold or silver, nor would be convertible into gold or silver, but would be convertible into gold *and* silver, both of which would be combined in a bar, *i.e.*, a bar of a given weight of gold plus a given weight of silver in proportions fixed once for all upon the introduction of the scheme. The Central Bank, under such a system, would not buy or sell either metal separately but would buy or sell this combination without limit and the reserves also would be calculated in terms of this combination.

Marshall's proposal has an advantage in that it broadens the monetary base to include two metals instead of one, and if the values of the two metals relative to goods, move in opposite directions, under this system, greater secular price stability would be secured than is possible with either gold or silver alone as the standard of value. The system, again, would allow the relative prices of gold and silver to vary freely, provided, of course, their combined prices were always the same. There is finally, no possibility of one or the other metal being driven out of circulation.

But, as in the case of bimetallism, the degree of international co-operation necessary for the successful working of

such a system is unlikely to be achieved in these days of economic nationalism.

**Limping Standard :** Bimetallism is said to be limping when the two metals which circulate are unlimited legal tender, but only one has got free coinage. In France, for instance, both gold and silver coins circulated and were unlimited legal tender, but only gold coins had free coinage. So, France had a Limping Standard. It is said to be limping because of the idea that it has, as it were, two legs, one of gold and the other of silver, but since there is no free coinage in one, one leg is said to be crippled and deformed.

**Gold Standard :** Although in recent times the importance of gold has greatly declined, yet the value of gold, the yellow metal, christened as the 'Red Queen' is, and perhaps is likely to remain for a long time to come, an interesting subject for the student and a problem for the monetary authorities of every country saddled with the responsibility of ensuring stability in the prices, that is, in the value of money. The countries having a gold standard, obviously, are more concerned with the value of gold, since in these countries the value of money and that of a defined weight of gold are to be kept at an equality with one another. It may be of some interest, therefore, to discuss briefly how the value of gold is influenced by the demand for it and its supply or the influence of the cost of production.

**Value of Gold :** *The demand for it and the influence of the cost of production.*

Gold is not only demanded by the monetary authorities for monetary uses, or for purposes of reserves ; but it is also demanded for industrial and decorative purposes, as well as, for hoarding. Increased demand for gold in industrial use, therefore, will decrease the stock available for its use as money and thus the value of gold as money will be appreciated. Similarly, the value of gold as money will fall if more gold is made available for monetary use because of a fall in its demand for industrial and decorative purposes.

The value of gold, therefore, ultimately depends on the world's demand for it for all purposes and on the existing stock of gold in the world. The accumulated stock and the current production constitute the total supply of gold. The rate of current production of gold, it should be remembered, varies with the value of gold. For, if a country has gold standard, a change in the value of gold would mean for the producers a change in their expenses of production, while if a country has a standard other than gold, it would mean a change in the money price they, *i.e.*, these gold producers, get for their product. In either case, therefore, a change in the value of gold affects its output ; it will decrease or increase as the value of gold falls or rises. That is, in other words, the value of gold tends to correspond with its marginal cost of production, *i.e.*, with the cost of production of "that part of the annual output which is wrested with most difficulty from the lap of Nature."<sup>1</sup> This, however, does not imply that the value of gold tends to remain stable over a period of time. For, the marginal cost of production of gold varies according to the quantity produced. The supply of gold, therefore, will vary as the marginal cost of production varies and thus affect its value. But the changes in the output will only have negligible effect on the total supply of gold since the annual output of gold constitutes only about 2 p. c. of world's existing supply.

In a country having gold standard, therefore, the quantity of money will be ultimately limited if by nothing else, then by the cost of production of gold, and the value of it will tend to equal the marginal cost of production of a given weight of gold. But as in other cases, the value of gold cannot be said to be determined by the cost of production ; because, as we have seen, that although any change in the cost of production will affect the output and hence, the price, the current output is such a small fraction of the existing supply and the current cost of production is so remotely connected with the existing

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<sup>1</sup> Robertson—Money, p. 84.

supply, that it cannot be said that the value of gold is determined by the cost of production. It is true that the quantity of gold in existence is ultimately limited by the cost of production of gold, but we cannot say that "it depends on it in any direct and simple manner."<sup>1</sup>

**Gold Standard :** Gold standard, as we understand it, was never adopted by any country with any motive, for example, either to secure stability of exchange or because it would work 'automatically'. No country invented gold standard for any purpose, rather, it is the result of centuries' of evolution. Gold standard, "grew naturally out of the historical development of money." The essence of gold standard, however, is that the purchasing power of a unit of the currency of the country having gold standard is kept equal to the purchasing power of a given weight of gold. The different varieties of gold standard are, in brief, discussed in the following paragraphs.

**The Full Gold Standard :** A country is said to have a full gold standard, when its currency system has the following features :

In the first place, its currency shall consist mainly of coins containing gold equal to their face value. Secondly, the monetary authorities shall be prepared to convert gold into coins without any charge and without any limit too. Thirdly, the monetary authorities shall also be ready to buy and sell gold in unlimited amounts at fixed prices.<sup>2</sup> Fourthly, any other type of money, *e.g.*, notes, etc., must be kept at a parity with the standard money (which is defined as a fixed weight of gold) and also should be convertible into it. Finally, there shall be no restriction either on import or export of gold.

Such a system was in operation in the U. K. before the First World War (1914-18). Gold sovereigns of a definite weight of

<sup>1</sup> Robertson—Money, p. 84.

<sup>2</sup> The price at which gold will be bought and the price at which it will be sold may, however, slightly differ. For instance, in England, while the price at which one standard ounce of gold was bought in terms of sterling, was £3-17s.-9d., the price at which it was sold was £3-17s.-10½d. Hence, there could not be any appreciable change in the price of gold bullion.

pure gold mixed with a little alloy (123·27447 grs. 11/12ths fine) circulated freely. There was no restriction on export: any body could melt or export sovereigns. Silver and copper coins, Bank notes could be exchanged for sovereigns and gold could be converted into sovereigns, without any charge and in unlimited amounts.

**Gold Bullion Standard:** A country is said to have a gold bullion standard when the gold coins do not circulate within the country and the circulating media consist of paper currency notes, token coins etc., but the monetary authorities are under the obligation to convert those circulating media (that is, the notes, token coins, etc.) at fixed rates, not into gold coins, but into gold bars containing a fixed weight of gold bullion. In other words, under gold bullion standard, although gold coins do not circulate, yet the Central Bank is under legal obligation to buy and sell gold in exchange for local currency at a fixed price and in unlimited amounts above the legal minimum which is sometimes fixed. Under such a system there are no restrictions on export or import of gold.

Gold bullion standard was in operation in England from April, 1925 *i.e.*, when she returned to gold, till September 1931, that is, when she again decided to abandon gold standard. During this period although gold coins did not circulate and the currency consisted mainly of paper notes, still there was 'convertibility both ways', that is, gold could be converted into currency and the currency could also be converted into gold. The Bank of England was under legal obligation to buy any amount of gold at £3-17s.-9d. per standard ounce and to sell it, in minimum amounts of 400 ounces, at the fixed price of £3-17s.-10½d.

Gold bullion standard thus has the merit of securing economy in gold because, instead of employing as currency all the monetary gold is kept in the Central Bank and it also preserves the essence of gold standard, because, the currency units, under such a standard, can be converted though not into gold coins.



but into gold bars. The system, is also helpful for controlling the volume of currency since the monetary authority can issue notes provided there is a certain gold backing in reserve. Besides, by preserving stability of the exchange rates and by allowing movements of gold whenever there is a margin of unbalanced transactions, it succeeds in bringing about an integrated and inter-related price-income structure among the countries adhering to such a standard.

**Gold Exchange Standard :** A country is said to have a gold exchange standard, when, neither gold coins circulate within the country, nor its currency can be converted into gold but the Central Bank of the country is under legal obligation to redeem the domestic currency, not in gold, but in some other currency which is itself convertible into gold at a fixed ratio. Such a standard is usually adopted by those small or poor countries which do not possess gold themselves and hence designate as the currency in which they will redeem their own notes at a fixed rate, the currency of one of the large countries having gold standard.

While before the first Great World War, gold exchange standard was in operation in several countries, *e.g.*, India, Philippine Islands, Java, etc., as a monetary system, it became very popular in post-war years and was adopted by a large number of countries to economise the use of gold.

Besides securing an economy in the use of gold, the countries adopting gold exchange standard gained in some other ways too, *viz.*, the cost of transport of the specie which otherwise they would have to incur from time to time, if gold movements took place, were no longer necessary. Elimination of gold movements also resulted in great economy. Secondly, international payments were facilitated because of the stability of the exchange rates which was secured by tying up their currencies with a strong gold currency. Finally, the reserves which were kept abroad earned for them some interest too.

There are, however, certain defects of the Gold Exchange Standard. In the first place, a large balance has to be kept

in a foreign country. Secondly, besides curbing the independence of the monetary authority, such a system is obviously risky, if not for any other reason, for at least one reason, *viz.*, the 'planet' country, as Benham observes, may suddenly leave gold or devalue. The currency authority, again, under gold exchange standard, is obliged to adjust the sale of drafts on the gold reserve in such a way as to maintain the rate of exchange between the two gold points. The gold exchange standard, that is to say, does not function automatically as does the gold standard. Finally, movements of gold, under gold standard, operate in reciprocal fashion but under gold exchange standard, movements of liquid resources, other than gold, do not operate in reciprocal fashion. There may, for instance, take place expansion or contraction in the currency of the satellite country in response to the changes in its balance of payments position, but there need not be any reciprocal action on the price-level of the country in which the balance is kept, that is, the 'planet' country.<sup>1</sup>

<sup>1</sup> The gold exchange standard should, however, be not confused with an Exchange Standard. An exchange standard has certain features of its own. In brief, these are the following: In the first place, it means that some foreign currency is adopted as the standard currency and the home currency is convertible into this foreign currency at a fixed rate, and the Central Bank is obliged to maintain parity between the two currencies. Secondly, a reserve of the standard currency has to be maintained in the country whose currency is adopted as the standard. Thirdly, the balance of payments will be reflected in the volume of reserve, that is, a deficit will result in a diminution and a surplus in an increase of the reserve.

The exchange rates under such a system cannot fluctuate since they are legally fixed and any change in the balance of payments is not followed by flow of specie for securing adjustment, but is indicated only by a change in the volume of reserves. Nevertheless, the system has limitations too. In the first place, the degree of co-operation required for successful working of the system between the countries adopting it, is difficult to have. Besides, the operation of this system is not so simple as it looks. An exchange standard, observes Hawtrey, "works very well so long as conditions in foreign countries in whose currencies the reserves are held are normal, but there can be no certainty that this will always be so."

Another form of gold standard which Crowther christens as the Gold Parity Standard, exists when the monetary authorities undertake no obligation to

**Pre-1914 Gold Standard : How it Worked ? Why Collapsed ?** Gold standard, as it prevailed before the 1914-War, was characterised by certain significant features. In brief, these are the following :

The standard unit of account was defined by statute in terms of a fixed weight of gold of specified fineness and secondly, the monetary authority was under statutory obligation to redeem notes into gold coins, and there was, in the third place, no restriction on export or import of gold, and finally, no central authority was there to control deliberately the supply of money to meet the needs of business, but it "was left to the reputedly semi-automatic regulation of so called natural forces, most important among them the cost of production of gold."<sup>1</sup> The pre-war gold standard, in other words, lacked a central authority which could co-ordinate the national policies of the countries which were on it. And the primary economic function of the gold standard internationally was to put some limit to the supply of money and credit and thus to prevent excessive fluctuations in the volume of the total media of payments. Such arrangements had obviously shortcomings too but those "were felt to be a price well worth paying for the freedom it ensured from intervention and possible abuse by political authority."<sup>2</sup>

The orthodox gold standard, it is also held, served what is said to be "an *international* function of regulation" in the sense that the rates of foreign exchange in different countries, so long as their currencies were based on gold, were kept stable within the narrow limits of fluctuations set by the gold points, through the sensitive mechanism of the foreign exchanges. It is thus to be noted that what the gold standard ensured to the

convert the currency into anything else, but they do undertake the obligation to keep the exchange rate of the currency stable in terms of gold. This form, as has been observed by Crowther, is very similar to what will prevail in future under the aegis of the International Monetary Fund.

<sup>1</sup> A. D. Gayer—Monetary Policy and Economic Stabilisation, p. 5.

<sup>2</sup> Gayer—Op. Cit. p. 5.

countries adhering to it, was not a common price-level, but "internationally a closely equilibrated price and income structure." In case of a divergence of prices in any country far above the world gold price-level it had to pay the penalty by enforced departure from the gold standard. For, the mechanism could not permit one way movement of gold for a long time. If the rules of the gold standard game are followed strictly, any dislocation in the international rate of exchange would be corrected by movement of specie. If, for instance, the prices in one country are higher than the prices in other countries on gold standard, then others would not buy from that country and hence, its exports would decline and the imports will increase leading to export of specie and decline in prices, until, ultimately, the equilibrium between prices in all other countries is restored. Flow of specie, as observes Taussig, sets in motion forces that, sooner or later, stop the flow.

**Why Collapsed ?** The gold standard, in any form, it is said, ensures a fixed rate of exchange between the countries adopting it. Obviously, this it does, for, when the currency of each country is convertible into gold or into a gold standard currency, at a fixed rate and conversely, it just follows that the currencies of these countries are convertible into one another at practically fixed rates. It also follows that no country, once it adopts gold standard, is free to raise or lower the commodity prices, in terms of its own currency, for, unless the prices move in harmony with the prices in other countries, gold movements in either direction will take place.

All this is true only with an important proviso, *viz.*, that the rules of the gold standard game are strictly adhered to by the countries adopting it. And the rules are that not only the countries should allow free export or import of gold but also should contract credit when gold goes out and expand credit when gold comes in, that is, gold movements should be allowed to exercise their natural influences on the prices. And as observes

Crowther, the "gold standard is a jealous God. It will work—provided it is given exclusive devotion."<sup>1</sup>

The question, therefore, is: was such exclusive devotion given by the countries which were on gold standard, to ensure successful working of the gold standard mechanism? Obviously not. The countries which were on gold standard, in practice, during the inter-war period, did not adhere to these rules of the game. To keep the domestic price-level immune from any effect of gold movements, the Central Banks of different countries adopted the policy of 'sterilising' the surplus gold when it came by sale of government securities and 'offsetting' the effects of the outflow of gold by purchase of securities in the open market. By open market operations, thus, these central banks did not allow the gold movements to have their natural effects on the level of prices of these countries.

It is also imperative to ensure successful working of the gold standard, that the debtor countries should be allowed to repay their debts by increased exports and no measure should be taken by the creditor countries to obstruct such exports by these debtor countries by imposition of tariffs, etc. That is, in other words, no country should adopt any policy, financial or commercial, which would hinder proper adjustments of balances of payments and real transfer of net payments whenever necessary. But the countries in which gold standard was restored after the 1914-18 War hardly cared to pay any devotion to this principle of gold standard.

Again, the conditions under which gold standard was restored differed very greatly from one country to another. Great Britain, for instance, decided to go back to old parity which meant considerable over-valuation of the pound sterling while, on the other hand, France, when she returned to gold, stabilised her currency at a low external value of franc, that is, devalued her currency. In Germany was introduced an altogether new currency unit based on gold to wipe out the surplus

<sup>1</sup> Crowther—An Outline of Money, p. 306.

purchasing power accumulated during the post-war years. Hence, the whole process of currency stabilisation was rather painful and these different measures adopted by these countries naturally had their different repercussions. In Great Britain, the stabilisation of the £ at a high external value and the rigid economic system which existed in the country, with high costs and wages meant a fall in her exports, (for it meant high cost of production for her and she could not compete with others producing at a lower cost). The obvious consequence was, a tendency towards unfavourable balance of trade and export of gold. But her rigid cost structure did not allow her to adopt a policy of contraction when gold was going out. So, the over-valued currency on the one hand, and her rigid cost structure on the other, proved it difficult for Britain to secure international equilibrium or to maintain her position in the international market. And hence, before long she had to abandon gold standard. (September 1931).

In the case of France, the stabilisation of her currency at a lower rate stimulated export.<sup>1</sup> France thus accumulated large amount of gold. But this was not allowed to have its natural effects on the price-level and hence the price-level did not rise in France, although gold was coming in.

The U. S. A. though emerged as a creditor country after the war, adopted a protectionist policy. The debtors could not pay by exports because of the tariffs and other stringent measures adopted by her to check imports and, therefore, they had to send gold. U. S. A. thus too absorbed a large amount of gold which, again, was not allowed to influence the price-level!

Besides, these divergent policies which were adopted by the three big countries, there were also other causes no less significant, which led to the collapse of the gold standard. For instance, the constant movements of large volume of foreign balances, the "hot money" as it is said, from country to country

<sup>1</sup> She at this time, it should be noted, was receiving reparation payments from Germany.

or the existence of huge international debts and the payment of reparations also meant severe strain on the transfer mechanism of the gold standard. Further, the spirit of acute economic nationalism which prevailed and the policy of protectionism which was pursued by almost all the countries, in no small measure contributed to the collapse of the gold standard. But a very important cause which led to the breakdown of the gold standard was the American policy of discontinuing investments. Many European countries were depending on loans from U. S. A. for their recovery and also for meeting their obligations. The cessation of these loans following the collapse of the Stock Exchange boom in U. S. A. in 1929 made the whole position very much worse for these countries, specially, for Germany and Austria, because, the short-term advances made to these countries were called back. Though for the time being the Bank of England and the Bank for International Settlements came to Austria's rescue, the matters did not improve much. For, before long the other countries of central Europe were affected. Events followed one another in quick succession. In 1930, there was a run on the Reichsbank. The United States declared a moratorium for a year of war-debt payments and reparations. Britain had large short-term liabilities and the prevailing panic and suspicion in foreign countries regarding her solvency resulted in considerable depletion of her gold reserve. The naval mutiny led to increased run on London and made the position still worse in Britain and eventually in September, 1931 payment in gold was stopped in Britain. In 1933, America abandoned gold standard. France, Belgium, Holland, Switzerland and Italy,—the *gold bloc* countries, though continued for some time on gold standard, had ultimately to submit to the severe deflationary pressure and suspend gold payments. Gold standard was thus abandoned by the countries which were on it in the early thirties.

**Merits of the Gold Standard:** When we examine the working of the gold standard in practice in the countries which adopted it, the benefits it bestowed on the economic systems

of these countries can easily be found out. In brief, these are the following :

In the first place, it is pointed out that "the gold standard system as a whole gains by having virtually a common currency in the same way that a country gains by having a single currency instead of a separate one for each of its various local areas." <sup>1</sup>

Secondly, gold standard, by providing practically a stable rate of exchange, which can fluctuate only within the narrow limits of gold points, and thus eliminating the risk of losses from fluctuations in the exchange encourages international trade and investments.

Thirdly, gold standard, by ensuring stable rate of exchange secures international co-operation and the advantages of international division of labour. All these, again, help in improving the standard of living of the rapidly increasing world population.

Fourthly, it is maintained, that gold standard not only secures the stability in the rates of exchange but by linking the prices to gold, also secures the stability of prices, that is, in other words, stability in the value of money. Gold is an extremely durable specie and the annual output of it is only a small fraction of the existing stock. Gold prices, therefore, do not fluctuate appreciably over time. And since under gold standard the purchasing power of money and that of gold are identical, it is held that gold standard mechanism secures stability in the value of money over time. Again, since the price-levels of different countries, under gold standard, move in harmony, the mechanism secures stability over space also.

Fifthly, the gold standard, it is held, serves as the 'golden brake' of the credit machine. No single country on the gold standard can embark upon a policy of expansion or contraction for any considerable length of time or to any considerable

<sup>1</sup> Benham—Economics, p. 473.



degree. For, sooner or later, gold flow is sure to act as an automatic brake on such expansion or contraction of credit. And although small doses of expansion and contraction are possible, the mechanism of gold standard rules out the possibilities of severe inflations and deflations of the self-generating type. Finally, it is maintained that the mechanism of gold standard is semi-automatic, simple and requires few restrictions. Automatism and simplicity are thus said to be great advantages of gold standard. It also secures a reasonable distribution of gold among the countries which adopt it and adhere to the rules of the gold standard game.

**Defects of the Gold Standard :** Gold standard, it is argued, secures a stable rate of exchange. But in recent times the governments of the countries have begun to feel, as they did never before, the imperative need of achieving full employment. And full employment can be achieved only by suitable credit and spending policies. It is, therefore, being increasingly felt that these policies cannot be subjected to the 'single aim of keeping the exchange rates stable.' Monetary policies now-a-days are considered as integral parts of an economic policy the primary aim of which is to secure domestic economic stabilization at a high employment level, and stable exchange rates are desired only because fluctuating exchange rates would disturb domestic stability. The need for international exchange stability, for instance, may require deflationary measures in some countries that may be incompatible with the chosen objectives of the domestic credit policy. It is, therefore, unlikely that stable exchange rates will be preferred under all circumstances "if their maintenance involves deflationary and depressive credit restriction." Strict adherence to gold standard may curb the independence of monetary authorities, for the mechanism of gold standard necessarily implies that countries adopting gold standard should move in unison.

The gold standard mechanism, it is claimed, is simple and works semi-automatically and, therefore, is superior to

other monetary systems. On closer examination, however, it will be found that the mechanism is neither simple nor semi-automatic. The degree of flexibility and stability in the economic structure of the world necessary for a smooth working of the gold standard mechanism can be had only as the "result of a highly fortuitous combination of circumstances. It is a fair-weather craft, of doubtful sea-worthiness in stormy waters."<sup>1</sup> And no wonder, therefore, that when the necessary conditions are absent, the gold standard is abandoned. That it worked till 1914 does not necessarily imply that it is simple. The truth rather is that until that year the mechanism of the gold standard was not put to severe tests, since there were no major international disruptions. But when there are potent causes of international payments disequilibrium, it becomes extremely difficult to handle the mechanism from the standpoint of domestic economic policy as a whole. Similarly, the gold standard mechanism can hardly be said to be semi-automatic. It can work only when the Central Banks perform efficiently the difficult task which rests on them *viz.*, contraction and expansion of credit as and when necessary to the desired degree. In practice, this may prove a task more difficult than it appears to be in theory and the Central Banks may not be able, even though willing, to adopt a policy of reducing costs and prices to a desirable extent when gold flows out. Similarly, when gold comes in, it may not be possible to create sufficient demand for new loans.

The gold standard mechanism, it has been said, suffers from an "inherent bias towards deflation."<sup>2</sup> This is so because of the lack of reciprocity in the gold standard mechanism itself. For instance, while the country which loses gold must contract credit in order to maintain its gold reserve, the country, on the other hand, which receives gold is under no

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<sup>1</sup> Halm—Monetary Theory, (2nd Ed.), p. 197-8.

<sup>2</sup> Joan Robinson—The International Currency Proposals—E. J. June—Sept. 1943, p. 161.

such compulsion to expand credit in order to check the inflow of gold.<sup>1</sup>

"The losing countries will be subject to the blast of depressing forces, whether operating through falling exports or internal adverse factors, and it is most vexatious for them to be compelled to add to their troubles by a restrictive monetary policy.

And indeed, the trade cycle apart, there seems something inherently irrational in a system, the essential *modus operandi* of which requires a restriction of productive activity in a number of countries from time to time. The basis of any rational system should be the maintenance of full employment. Thus the gold standard stands condemned."<sup>2</sup>

Nor, again, can it be said that the gold standard checks inflation. For, there is nothing in the mechanism of the gold standard which would prevent "a world-wide expansion or contraction of credit." The actions taken by all the Central Banks, instead of neutralising each other, may, as well, lead to a world-wide circle of contraction and expansion. If contraction prevails in some countries while the others are free from it, the chances are, that, sooner or later, the diminishing purchasing power of these countries will affect them. Similarly, again, a vicious circle of inflation may also develop, *viz.*, increased expenditures and incomes in the expansion countries will result in increased imports, and consequently, the other countries, now exporting more than before, will obviously expand credit, expenditures and incomes. Rightly, therefore, remarks Hawtrey, that the gold standard is a state of "anarchy in world credit control."<sup>3</sup>

Finally, the gold standard in its orthodox form unnecessarily locks away a large amount of gold as reserves which

<sup>1</sup> The Central Banks, it should be noted, have a greater power to force their member banks to contract credit than to force them to expand credit.

<sup>2</sup> Harrod—International Economics, p. 152.

<sup>3</sup> Hawtrey—Trade Depression and the Way Out, 1931, pp. 15-18.

could be otherwise utilised, as observes Halm, to serve as a fund of highest international liquidity, to help "to bridge temporary balance of payments disequilibria" and also to "gain a reasonable amount of freedom in the domestic monetary and general economic policies of the member countries."<sup>1</sup> "Cover reserves," are necessary because we want to achieve strictly automatic credit contraction in a country which is losing gold. But, if the monetary authorities were free to adopt any monetary and credit policy they thought desirable, obviously we could do without gold-backing requirements which only lock away a larger part and "sometimes the major part of the gold reserves, so that, it can never be used."<sup>2</sup>

**The Future of Gold :** The orthodox gold standard mechanism thus stands for "rigid exchange rates, rigid gold-backing requirements, reciprocal deflation and inflation according to gold movements, and conservative domestic credit policies with balanced budgets and without deficit spending. All this is unacceptable to those who believe in the Governments' responsibility for economic stabilization, full employment, and labour union strength."<sup>3</sup> It is, therefore, safe to predict that "the 'automatic' gold standard mechanism will never return." With its 'inherent bias towards deflation,' the gold standard is incompatible with the policy of rapid expansion, which has now become imperative for all the countries to adopt. As an internal medium of exchange, in recent years, the importance of gold has also considerably declined. On the other hand, in the sphere of international payments, countries are showing great interest in the possibility of working of arbitrary currency standards and trying to adjust themselves with such a system. Will then, it is pertinent to ask, gold be replaced by paper and go out of use altogether? Such an inference, however, is unwarranted. For, human nature being what it is, is unlikely

<sup>1</sup> Halm—Monetary Theory, p. 205.

<sup>2</sup> J. M. Keynes—A Treatise on Money, Vol. II, p. 265.

<sup>3</sup> Halm—Monetary Theory, p. 207.

to abandon gold for good. Besides, gold, as the most liquid international asset, will still have important functions to perform in the field of international payments. It will, for example, still be useful as a stop-gap during temporary balance of payments disequilibria, and also as a common denominator for the various currencies.

**The Case for Managed Money :** By managed money is meant the money whose conditions of issue are subject to arbitrary decision of the monetary authorities on whom rests the responsibility of managing the issue in such a way that by convertibility or otherwise, it shall have a definite value in terms of an objective standard, or in other words, on whom rests the responsibility of managing the value of money. Generally, however, by managed or fiat money system is meant a monetary system in which inconvertible paper money, that is, paper money not redeemable in any standard metallic money circulates and the Central Bank manages its issue in such a way as to maintain monetary stability.

There are certain advantages of such a monetary system. The value of a currency in the long run, it is said, depends on the confidence the people repose in it; it is, therefore, not necessary that the currency should consist of gold coins or, for that matter, of any other metallic coins. For, people's confidence may be as great when the currency consists of inconvertible paper as when it consists of gold or other metallic coins. Why then not accept such a system which does not suffer from the limitations of a metallic standard and also is the cheapest form of currency? Since no precious metal is necessary under a managed paper standard, either for use, or for locking up (in sufficient amount) as reserves, it would release such resources for more productive uses. Secondly, since the monetary authorities, under such a system, are not under legal obligation to keep large metallic reserves they will have greater freedom in adjusting the supply of and demand for money and in controlling the volume of credit and movements of prices.

Finally, any country adopting such a system enjoys autonomy in monetary affairs since, as when on gold standard, it need not move in harmony with others sacrificing its own freedom in monetary affairs.

These are advantages which merit consideration no doubt, but such a system is fraught with grave dangers too. For instance, the danger of over-issue, when there is such a system, is a real one. The system provides no security against over-issue, that is, inflation and hence, people are hardly likely to repose their confidence in such a system. Secondly, stable exchange rate, under gold standard, encourages international trade and investments. But such a system, while will endeavour to stabilise the internal prices, will allow the rate of exchange to fluctuate with the fluctuations in the conditions of trade, and hence, would discourage international trade and investments. Finally, a depreciation of paper currency, in extreme cases, may ultimately lead to a flight from currency in the sense that people may, in such circumstances, that is, when the paper money depreciates abnormally, choose to hoard their wealth in the form of durable goods. Whatever the merits of such a system, it cannot be denied that gold will still have a very useful role in modern international payments system and we cannot abandon gold altogether.

"The issue, therefore," as observes Halm, "is not whether we shall re-introduce the old fashioned gold standard system or discard gold entirely; the issue is rather whether gold can be used to advantage in a more flexible multilateral payments system or whether the world will break apart into separate monetary blocs."<sup>1</sup>

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<sup>1</sup> Some economists, even when gold standard was in vogue, advocated what is known as the Tabular Standard or Isometric Standard, based upon index numbers, with a view to stabilize internal prices. The idea was to control the volume of currency and credit in accordance with the changes in a tabular figure arrived at by means of a composite series of index numbers of the internal values of capital goods, consumer's goods, and services. Obviously, this would be a system of *managed currency* aiming at securing stability of internal prices.

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## CHAPTER 30

### CREDIT AND BANKING

#### *Credit*

**What is Credit ?** When we use the term credit, obviously, we have in mind a type of transaction in which two persons are usually involved *viz.*, one who gives the credit, that is, the creditor, and the other to whom the credit is given, that is, the debtor. We have in mind, too, perhaps in a little vague way, that these two persons are known to each other, for, otherwise no credit transaction, *i.e.*, no lending or borrowing would take place. The essential attribute of all credit transactions, thus, is this confidence of the parties involved, in each other, without which no such transaction can take place. For instance, while one buys goods and pays the price no question of confidence arises, for the transaction is cash transaction. But when one buys goods and promises to pay the price at a future date, the question of confidence does arise. For, it is a credit transaction and unless the seller has confidence in the buyer's promise, he would not part with his goods. For the lender who lends money, or the seller who sells goods on credit, the confidence in the borrower or the buyer, each of whom promises to pay (*i.e.*, repay the borrowed money or pay the price of the goods) at a future date, is absolutely necessary, or else, neither lending nor selling on credit would take place. The essence of credit, thus, is confidence and the other significant feature of course, is the element of time.

**Types of Credit :** Different types of credit have been distinguished from the standpoint of the ultimate use or purpose of it, *viz.*, consumption credit, production credit, commercial credit and bank credit.

When the purpose is immediate \_\_\_\_\_, it is said to be consumption credit, and when the purpose is earning a surplus income by profitable investment of the sum borrowed, it is said to be production credit. When, however, the purpose of

the credit is to finance the manufacture and marketing of goods, it is said to be commercial credit. By bank credit is meant the credit which is created by the banking institutions. A bank, as we shall see later, can lend much more than its cash reserves.

**Credit Instruments :** The huge volume of transactions in the complex economic system of the present age, would indeed be impossible in the absence of a sound and extensive credit system. The credit instruments which are much in use in these days, therefore, largely contribute to the smooth functioning of the modern economic system as a whole. The important credit instruments which are very popular in all advanced countries today, are the following :

**I—The Cheques :** As an instrument of credit a cheque may be said to be the simplest and the most widely used in advanced countries of the world. A cheque may be defined as an order upon a bank by an individual or a firm having a deposit in the bank, asking it (that is, the bank) to pay a certain sum of money to the bearer of the cheque or to the person whose name may be written on the cheque.

The element of credit or confidence in the cheque can easily be seen. No one, for instance, would accept the cheque in payment of his dues unless he has confidence both in the man who draws the cheque, and also in the bank upon which it is drawn.

Sometimes, cheques are crossed. A cheque is said to be crossed when two lines are drawn obliquely across the cheque. Such cheques are generally carried to accounts and can be paid only to the bank in whose favour they are crossed. Often, the names of the banks are written between the two lines which are drawn across the cheques when they are crossed.

**II—The Bill of Exchange :** A bill of exchange may be defined as an order by a person or a firm, (the 'drawer'), upon another person or firm, (the 'drawee'), instructing the latter to pay a certain sum of money for the value re-



drawer (payee) or to a third party after the expiration of a definite period of time.

A bill of exchange is said to be a 'sight bill' when the payment has to be made on presentation of the bill, that is, on demand. If, however, payment is to be made after the 'expiration' of a definite period of time, it is said to be a 'time bill'.

A cheque differs from a bill in this that payment has to be made in case of a cheque on demand, while in case of a bill, usually the payment is to be made after a stated period of time. Very appropriately, therefore, observes H. Withers, "a Cheque is a bill of exchange payable on demand."<sup>1</sup>

**III—Banker's Draft :** Sometimes cheques are drawn by some banks upon other banks. A cheque when drawn by a bank upon another, is called a banker's draft. As a credit instrument it is also very popular.

**IV—Notes :** Notes may be of three kinds, *viz.*, (i) Promissory notes ; (ii) Bank notes and (iii) Government paper money.

(i) A Promissory note is a written promise of the borrower to pay a certain sum of money to the lender, either on demand or at the expiration of a definite period. A promissory note is made negotiable or transferable, when the creditor or the 'payee' endorses the note.

(ii) A Bank note is just a promise made by the bank issuing the note to convert it into legal tender on demand. It is thus, "neither more nor less than visible evidence of a bank's debt, which can be passed round from hand to hand in settlement of all sorts of individual debts."<sup>2</sup>

(iii) Government paper money consists of notes which are issued by the government and are legal tender. Such notes may be convertible, that is, may be converted into metallic

<sup>1</sup> H. Withers—Meaning of Money (5th Edn.), p. 84.

<sup>2</sup> R. S. Sayers—Modern Banking (1937, O. U. P. London), p. 8.

coins or bullion, whenever desired, or inconvertible (or fiat money), that is, not redeemable into metallic coins or bullion. The value of such inconvertible notes, which are not redeemable, depends on the command of the issuing authority, the government. Hence paper money of this type is also said to be *fiat* money.

Paper money is said to be representative, when it is fully backed by metallic reserves, that is, the notes issued are backed by reserves equal to their nominal value. The Silver and Gold Dollar Certificates of U. S. A. are examples of representative paper money. These are said to be merely bullion certificates and are convertible into bullion whenever desired.

**V—Book-Credit :** Book credits are largely used among firms and businessmen with a view to economise the use of money. When firms or businessmen grant book credit to other firms or businessmen the need for cash payment for each transaction between them is obviated ; only book entries are made and occasionally the balances, after cancellation of credits and debits, are paid in cash.

**Advantages and Defects of Paper Money :** The use of paper money has become very popular in these days in the advanced countries of the world for its various advantages. For instance, transactions of heavy amounts are greatly facilitated by paper money. Secondly, constant use of metallic coins necessarily means some wastage of the specie, which is eliminated by the use of paper money and finally, it is the cheapest form of currency conceivable and, when in use, releases considerable amount of gold or other precious metal which would otherwise be locked up as reserves.

Nevertheless, use of paper is not without some dangers, rather, there are certain very grave dangers in the use of paper. In the first place, there is the chance of over-issue, specially, when the government takes recourse to the issue of inconvertible paper money. Secondly, payments to foreign creditors cannot be made in paper. Since the issue of paper money rests

on the arbitrary decision of the issuing authority, its value is likely to fluctuate more than the value of commodity money, whose value changes only when the value of the metal of which it is made changes. Such fluctuations in the value of money will obviously mean instability in the rate of exchange too, which in its turn, will introduce uncertainty in business transactions and is sure to hinder foreign trade of the country.

**Principles of Note-Issue : The Banking and the Currency Schools :** Whatever may be the defects of paper money, it is evident, that as an internal medium of exchange the importance of gold has considerably declined and slowly but steadily, paper has gained ground. The process, however, has not been so smooth as it may appear to be. There was agreement in so far as the question was to ensure the economy of gold by greater use of paper. But there was no agreement as regards the principle which was to be adopted by the monetary authorities in the matter of issuing notes. The Bank Charter Act of 1844 of England which divided the Bank into two departments<sup>1</sup> was an endeavour to regulate the currency. A controversy arose between two groups, *viz.*, those who defended the Act and are known as the "Currency School" and those who opposed the Act and are known as the "Banking School."

According to the former, that is, the Currency School, the bank notes are money while the bank deposits are mere substitutes for money and hence, it is necessary that notes should be isolated from other bank liabilities (that is why, this group was anxious for the separation of the Bank of England into two departments—the Banking and the Issue Department) and should be fully backed by gold. The notes, that is to say, are just bullion certificates, substitutes for metallic money—they are issued to economise the use of metal but are not instru-

<sup>1</sup> The Act separated the business of note issue and of banking into two separate departments *viz.*, the Issue Department—to deal exclusively with the issue and redemption of notes and to hold the gold reserves as well as the fiduciary reserves and the Banking Department—to deal with the discount, ~~and~~ and banking business generally.

ments of credit, and hence, it is necessary that they should be backed by gold, pound for pound. For, otherwise, if so desired by the public, it would not be possible for the issuing authority to convert them into coins. The volume of currency, therefore, at any given time, is to be determined by the available supply of gold, expanding when the supply of gold increases and contracting when the supply of gold decreases. In other words, inflow or outflow of gold which, in their turn, depend on trade conditions of the country, will automatically lead to expansion or contraction of the volume of currency.

In their zeal to ensure safety by hundred per cent gold backing for the notes issued, the supporters of this school overlooked the primary requirement of a good credit system *viz.*, *elasticity*, which is specially necessary when emergency arises. Adoption of the currency principle would imply rejection of elasticity of the currency system which is inconceivable in these days when the countries are striving hard for achieving full employment and for which utmost elasticity of the currency system is necessary. Besides, a large amount of gold would be kept blocked under such a system unnecessarily.

The Banking School, on the other hand, which opposed the Act of 1844, stressed the necessity of leaving the entire decision with the bankers, who, according to this School, should determine, at any given time, the volume of notes to be issued. The apprehension of the Currency School was the chance of over issue, that is, issue of notes without reserve, leading ultimately to all the evils of inflation. But it was pointed out, that "it was inflation of credit rather than of currency which was to be feared; and the Act not only did nothing to regulate credit, but actually made the task of regulation more difficult. To control the supply of money by regulating the note issue was like trying to control the supply of currency by regulating the issue of pennies. The circulation of pennies does not by any means keep in step with the note circulation, nor the note circulation with bank deposits, still less with trade activity."<sup>1</sup>

<sup>1</sup> Cairncross—Introduction to Economics—p. 320.

The defenders of this school pointed out that all notes issued are never presented for conversion at any particular moment. Hence, if only a certain percentage of reserve be maintained against the notes issued, it will be sufficient to meet occasional demands for conversion. And this percentage or the proportion of reserve to be kept may be left to the discretion of the bankers, who from their experience, know the likely demand for conversion from the public. Thus, the needs of the business community and not rigid maintenance of reserves for mere conversions, should determine the volume of note issue.

Admittedly, this principle is superior to the other in that it permits expansion or contraction of the volume of currency according to the needs of the business community, and hence, enjoys elasticity. Besides, it secures economy in reserves also. It should, however, be mentioned that the country's monetary stability, according to this scheme, will rest on the bankers on whom will be vested the power of controlling the volume of currency. A great degree of caution and prudence, therefore, should guide every step they may take.

**Methods of Regulating the Note-Issue :** There are different methods of regulating the note issue. These have been discussed, in brief, in the following paragraphs :

**The Fixed Fiduciary Issue System :** We have referred to the controversy between the Currency and Banking Schools over the Bank Charter Act of 1844. Eventually, however, the recommendations of the Currency School were incorporated in the Bank Charter Act of 1844. The advocates of this school, as we have seen, were for 100 per cent gold reserve, but this would have meant the withdrawal of an enormous volume of notes from circulation. Hence, they agreed on an alternative principle—the so-called “fiduciary principle”—which left the existing note issue unchanged but made it impossible to add to it without the acquisition of additional gold backing. According to this principle, all notes beyond a fixed limit,—the fiduciary limit—had to be backed pound for pound by gold, that is,

if the Bank of England lost gold, it would have to reduce its note issue, and, if it gained more gold, it could increase its note issue. This principle, it was thought, would prevent sudden inflation or sudden deflation since it would make the supply of money behave exactly as if it consisted exclusively of gold.

The Central Bank, thus, under the Fixed Fiduciary Issue System, is authorised to issue notes against securities up to an amount fixed by the statute.<sup>1</sup> And notes issued above this amount, that is, above the fiduciary issue, must be covered by 100 per cent metallic reserve.

This system, however, has been found defective for more than one reason. For instance, under this system, considerable amount of gold will remain blocked idly. Besides, it lacks elasticity and does not allow the Central Bank to exercise necessary control over the creation of bank credit. Of course, the motive of the supporters of this system was to secure convertibility of notes by making provision for adequate reserves. But securing convertibility is not the only object of the monetary authorities. The currency system has to be elastic to meet emergencies and also to meet the needs of an expanding economy. For these serious limitations the Macmillan Committee recommended the abolition of this system.

"In modern times," observes Keynes, "the 'fixed fiduciary issue' method may work fairly well, if the fiduciary issue is fixed high enough to leave the Central Bank in unfettered control of the bulk of its gold reserves."<sup>2</sup>

**Maximum Fiduciary Issue System :** Under this system, the law prescribes the maximum amount of notes that may be issued by a Central Bank without gold reserve. This maximum is generally much above the average annual note circulation in normal circumstances and also is raised from time to time according to the requirements.

<sup>1</sup> In England, the Bank of England under the Act of 1844 could issue notes against securities up to £14 million. This limit was, however, raised to £200 and £500, millions in 1928 and 1939 respectively.

<sup>2</sup> Keynes—A Treatise on Money, Vol. II, p. 266.

This system was recommended by the Macmillan Committee for adoption in England because it is superior to the fixed fiduciary system, firstly because there is no legal restriction to the form or amount of reserves and the question of reserves, and its use is entirely left to the discretion of the Central Bank and secondly, it does not require 'blocking' of gold unnecessarily.

In France, this system was prevalent upto 1928. In the words of Keynes, the system "has the great advantage of allowing as much discretion as possible to the Central Bank, and, in particular, of rendering the whole of the reserves available for use in case of need (a liberty of which, however, the Bank of France almost never availed itself), whilst interposing a legislative safeguard against any serious measure of inflation. If the volume of the note-issue is to be regulated by law, this is perhaps the best system."<sup>1</sup>

**The Proportional Reserve System :** Under this system, the law prescribes that the gold reserve shall not fall below a fixed percentage of the note issue. That is, in other words, the Central Bank is under legal obligation to keep a certain percentage of gold reserve against the notes it issues. The usual practice, in case this reserve falls below this minimum, is to impose a tax on the issuing bank upon the amount by which it falls (i.e., below the minimum fixed by law) and the rate of tax rises as the deficiency increases.

While the elasticity this system provides is considered as its merit, its demerit lies in the fact that any contraction of the currency will also be violent. Besides, the system locks away considerable amount of gold unnecessarily. As observes Keynes, the "percentage method possesses—it seems to me—no sound foundations in logic or common sense.... It appears to combine all the possible defects of systems of note regulation. For it is very extravagant in locking away gold and does not

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<sup>1</sup> Keynes—Op. Cit. p. 265-66.

even exempt—as the “Fixed Fiduciary Issue” system does—the irreducible minimum of the note-issue. It allows the influx of new gold to produce a disproportionate relaxation of the credit position.... And, finally, in emergencies and difficult moments when the gold reserves are falling, it requires so drastic a curtailment of money proportionately to the loss of gold as to be exceedingly dangerous.”<sup>1</sup>

There is another system of regulation of note-issue which may be said to be a variant of the Proportional Reserve System. Under this system all or some part of the percentage reserve required against the note issue is held not in actual gold but in the form of bills or cash at some foreign banks.

This system is much like the same which Keynes describes as the Exchange Management. It secures economy of gold. But it is pointed out that it is not always a very sound system. For instance, many countries suffered huge losses during depression owing to the depreciation of sterling. This proved the inefficiency of the system. Besides, it suffers from the limitations of the percentage system.

**Conclusion :** None of the above methods, thus, is free from defects. The question, therefore, is what should be the right principle of note issue? The only rational purpose for legally prescribing the minimum reserve of gold against the notes issued is to prevent undue expansion of currency, that is, over-issue. Endeavours, therefore, should be made to achieve this purpose by the least wasteful method. To that end, the most judicious method would be that which would not fetter the hands of the Central Bank in any way. “The most sensible way would be,” observes Crowther, “to impose no limit at all, but to trust to the good sense of the monetary authorities. An increase in the currency is one of the later phenomena of an inflation ; to hope to prevent inflation by limiting the expansion of the currency is like hoping to stop a motor car that is running downhill by turning off the petrol. If the

<sup>1</sup> Keynes—Op. Cit. p. 268.



authorities cannot be trusted not to start an inflation, it will do no good, but merely precipitate a banking crisis, to limit the supply of currency."

"Not only is a minimum gold reserve a wasteful way of regulating the volume of the currency, it is also a most capricious one. For it does not stabilize the volume of the currency. It merely stabilizes the relation between the volume of gold and the volume of the currency, and if the volume of gold is itself fluctuating the domestic gold standard does not stabilize the volume of the currency but forces it to fluctuate."<sup>1</sup>

Economists, therefore, argue that it serves no laudible purpose by simply locking away reserves by legal provision which can otherwise be utilised for better and more urgent purposes. Besides, while the Central Bank is saddled with the responsibility of regulating the volume of credit and the price-level, why the entire responsibility of note issue should not also be left to it in order to give it a free hand both in controlling the volume of credit and regulating the price-level?

There is, however, the question of emergencies, and also of public confidence. It is also necessary that provision should be made for meeting the short period fluctuations in international balance of indebtedness. It is, therefore, suggested that in order to avoid the danger of over-issue, a maximum, which should be much above the average amount of note circulation in normal times and which may also be raised from time to time, in accordance with the requirements, should be fixed upto which the Central Bank can issue notes, as was the system in France till 1928. And secondly, the law may fix a minimum amount of gold reserve which the Central Bank should keep as provision against emergencies and to promote public confidence and also for meeting the short period fluctuations in the international balance of indebtedness, that is, the external drain.

These credit instruments have become very popular these days and are in vogue in all advanced countries of the world.

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<sup>1</sup> Crowther—An Outline of Money, p. 286.

Their use secures in no small measure economy of precious metals. Besides facilitating business transactions and productive activities there accrues material gain from the use of these instruments to the extent the wear and tear of the metals is eliminated.

Credit plays such a predominant part in the settlement of monetary and business transactions of all kinds, that "all countries of any economic importance have, to a greater or smaller extent, come to be based on a credit economy rather than a money economy."

### *Banking*

**The Nature of a Bank : Growth of Modern Banking :** The essential function of a bank is to collect savings from the people who have surplus and to lend out what it so collects to the people who are in deficit and, therefore, need money. In other words, the business of a bank is to borrow from one group of people and to lend to another group—"hiring money and hiring it out again." A bank thus is a "financial intermediary, a dealer in loans and in debts."

But how could a bank become such a 'financial intermediary'? Surely, it has been a long process of evolution which has made it what it is to-day. To understand the modern banking system, it may be of some use to know how it has grown gradually to its present position.

The present-day banker, as observes Crowther, has three ancestors *viz.*, (i) the merchant, whose reputation enabled him to issue documents which were accepted as titles to money (ii) the money-lender who, of course, worked with his own capital but men with surplus money soon found it convenient to entrust it to the money-lender for investment, because of his skill and experience. And "as soon as the money-lender reaches this stage, he is an embryonic banker. He has become a money-borrower as well as a money-lender."<sup>1</sup> Soon, again, it was found that it is convenient for his clients and profitable for him,

<sup>1</sup> Crowther—An Outline of Money, p. 23.

“to borrow their money outright, paying interest on it and mingling it with his own capital, and then to lend out the whole lot, making his profit from the difference between the moderate rate of interest he pays to his lending clients and the high rate he charges to his borrowing clients.”<sup>1</sup> (iii) The third ancestor is the goldsmith. How did the goldsmith come into the picture? It is only natural. “In a period when money consisted entirely of gold and silver, and forms of investment (except in land) were almost non-existent, private persons owned proportionately much more gold and silver than they do at present. What more natural than to entrust it to the goldsmiths for safe-keeping and get a receipt?”<sup>2</sup> Money, it is said, has two properties. “It is flat so that it can be piled up. But it is also round so that it can circulate. The progeny of the money-lender are concerned with flat money, piled up money, savings. The progeny of the goldsmith are concerned with round money, circulating money, cash. The big modern banks perform both functions.”<sup>3</sup> In the beginning, this was obviously a purely safe-deposit business and deposit receipts were used only when withdrawals of gold were necessary. But as observes Mr. H. Withers, some “ingenious goldsmith conceived the epoch-making notion of giving notes, not only to those who had deposited metal, but to those who came to borrow it, and so founded modern banking.”<sup>4</sup> It is true that this did not occur suddenly, rather, all this evolution took place in successive stages, which were none the less, ‘rapid and easy.’ The broad three stages through which this safe-deposit business developed into the ‘full-blown bank’ are: “First, the deposit receipts began to be handed round as money. It was certainly more convenient to pay debts by handing over a slip of paper than to withdraw gold, hand it over and then re-deposit it. So the deposit-receipt, once the goldsmith’s name and reputation became well-

<sup>1</sup> Ibid—p. 23.

<sup>2</sup> Crowther—Op. Cit., p. 25.

<sup>3</sup> Crowther—Op. Cit. pp. 24—5.

<sup>4</sup> H. Withers—The Meaning of Money, (5th Edn.) p. 20.

known, became the embryonic banknote. Second, even the deposit-receipt could be dispensed with. The goldsmith could merely be instructed by letter to transfer the ownership of such-and-such an amount of gold from the original depositor to his creditor. This is the birth of the cheque.... And finally, the goldsmith, now fully developed into banker, makes the discovery that he can safely issue deposit-receipts in excess of his gold stock. It is immaterial whether he does this by printing off more receipts and lending them to persons in need of accommodation (or indeed using them to pay his own household bills), or whether he does it by allowing his customers larger 'deposits' (on which they can draw by cheque) than the value of the gold they have deposited. In either case the crucial step has been taken. The principle of "creation" of money has been discovered." <sup>1</sup>

When, therefore, it is said that the banks "are not merely *purveyors* of money but also in an important sense *manufacturers of money*" <sup>2</sup> and that the supply of money depends on two sources,—'the banks and the state', it does not seem puzzling. Nor, does the definition of a bank as "an institution whose debts (bank deposits) are widely accepted in settlement of other people's debts to each other" <sup>3</sup> give rise to confusion.

**Functions of a Commercial Bank :** A bank, as we have already observed, is a "financial intermediary, a dealer in loans and in debts." Individuals save but little amount and it is the function of banks to gather these "driblets of spare cash" and "harness them to the tasks of enterprise." On the one hand, thus, the bank's function is to mobilise community's savings and on the other, to lend these savings at such rates of interest and in such amounts, as may be considered profitable. We may, therefore, pose two questions and the answers to these questions will give a fairly adequate idea of the functions of a modern commercial bank, *viz.*, how does the bank collect

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<sup>1</sup> Crowther—Op. Cit., p. 25-6.

<sup>2</sup> Sayers—Modern Banking—(1939). p. 1.

<sup>3</sup> Sayers—Op. Cit., p. 2n.

community's savings and secondly, what considerations weigh its lending policy ?

A commercial bank collects the savings of the community when it accepts deposits from its members. Any member of the community may bring cash and deposit it with the bank and in exchange the bank credits him with a deposit account equal to the sum deposited in the bank, withdrawable at any moment by cheque. Such deposits are known as the *deposits of money*, that is, cash or claims to cash, left with the bank by the depositors. There may be also *deposits* of credits issued by a bank to its clients against securities. That is, the bank may grant loan to its clients in the form of current account deposits in their names which they can draw upon, as in the former case, by chèques, whenever needed. Deposits, thus, may be created by the bank itself by accommodating its clients by making advances to them and crediting them with deposit accounts.

The income of the bank is the money it earns by making profitable investments. The ordinary banking business consists, besides accepting deposits and creation of deposits, of transferring bank deposits from one person or corporation to another, discounting of bills, advancing loans, granting overdrafts etc. Admittedly, the amount which the members of the public deposit may be withdrawn at any moment and in reality every now and then such withdrawals do take place but the shrewed banker knows from his experience that in the aggregate these deposits are relatively permanent and a proportion of these deposits can be safely lent to businessmen for definite periods of varying length. The banks thus, "borrow in small amounts and lend in large amounts ; they borrow short and lend long ; above all, they borrow liquid capital and lend it in much less liquid forms. Each transformation enhances the productivity of loan capital ; for the larger the loan, and the longer and more definite the period for which it is made, the more valuable, in general, are the uses to which it can be put. The banks, there-

fore, in mobilising capital, add to its productivity and render a service of great advantage to the community.”<sup>1</sup>

The banks perform yet another very important and significant function. By their behaviour, the banks govern the supply of bank deposits and hence exercise an important influence on the supply of money. At any given time, the total supply of money, as we have observed before, depends on two sources, viz., the state and the banks. The banks, therefore, are not merely the “*purveyors*” of money but also in an important sense are the “*manufacturers of money*.” In what sense, does a bank influence the supply of money? The answer is obvious. The bank provides in the shape of a note or a cheque a means of payment. Subject to the restriction which may be imposed by law or prudence and custom of keeping gold reserves, by manipulation of the issue of bank-notes which are generally acceptable and, therefore, are as good as money, the bank has the power of expanding or contracting the credit, that is, the supply of money.

To take an illustration : Suppose, that the law prescribes that against every 100 rupees in notes, rupees 20, that is, 20 p.c. must be kept as reserve in gold. The banks under such circumstances have the power to issue notes to the value of 5 times the gold deposited with them. In other words, for every additional deposit, the banks would be in a position to lend 5 times the value of the new deposit, and thus to add 4 times its value to the amount of money in circulation. Conversely, in case of withdrawals of deposits, they would be forced to ask for repayment of their loans and to contract their note issue in the same proportion.

Besides these important functions, the banks also perform a good deal of other miscellaneous functions. For example, whenever possible they finance the country's foreign trade by accepting or collecting the bills of exchange drawn by their clients. Often the banks also act as agents of their clients

<sup>1</sup> Alec Cairncross—Introduction to Economics (1944), p. 326.

and in this capacity collect cheques, bills, etc., for their clients. The banks also render certain services purely for the benefits of their clients, *e.g.*, they act as custodians of their valuables, as trustees or executors of wills etc. Issue of 'travellers' cheques, letters of credit, etc., by the banks also greatly help their clients.

**Balance Sheet of a Commercial Bank :** The balance sheet of a commercial bank is a statement showing on the left side, item by item, its liabilities, that is, the money which has been put at the disposal of the bank and on the right side, its assets, that is, the uses to which the money, left at its disposal, has been put. It is, thus, nothing more than a statement showing the bank's liabilities (claims which others have against the bank) and assets (*i.e.*, the wealth owned by the bank and the legal claims which the bank has against others).

Such a statement, showing as it does, equality of assets and liabilities—for every balance sheet balances—is of special import in the case of a bank. For, unlike other enterprises, when a bank acquires its assets, it does so by increasing its liabilities directly. The assets of a bank, that is to say, are directly exchanged for its liabilities. The whole business of a bank is shown in its balance sheet which also reveals the "ratios to which the bank is working."

It is now necessary to enquire what are the main items on the Liabilities' side and also what are the main items on the Assets' side of the balance sheet of a joint stock bank and to examine them one by one.

The main items on the Liabilities' side are the following :

(1) The resources of a joint stock bank, we know, are supplied partly by the shareholders and partly by the depositors. The capital which the shareholders have subscribed—the paid up capital—thus is the first item on the liabilities' side since, it is a debt due to them. (2) Similarly, the Reserve Fund which the bank has accumulated out of its past profits and has withheld from the shareholders for meeting any contingency,

is also its liability to the shareholders. (3) Thirdly, the undivided profits—to be paid out in dividends to the shareholders later on, also constitute a liability to the shareholders. (4) The bank often ‘accepts’ Bills of Exchange on behalf of its clients and such ‘acceptances’ increase the bank’s liability too, because, by ‘accepting’ a bill it makes itself responsible for payment of the sum mentioned in the bill when it falls due. In case, the client on whose behalf it has accepted it, fails to pay. Such ‘acceptances’ thus constitute what are described as the ‘contingent liabilities’ of the bank. In the balance sheet this item is balanced on the assets’ side by ‘cover for acceptances’ or liability of customers for acceptances.<sup>1</sup> (5) The bulk of the bank’s liabilities are, however, to its depositors. Deposits may be of two kinds, *viz.*, current or demand deposits (which usually earn no interest and are withdrawable by cheques on demand) and fixed or time deposits (which earn interest and can be withdrawn only after giving notice to the bank for a specified period of time, say a week or a month and are not chequable *i.e.*, against which cheques cannot be drawn).

The main items on the liabilities’ side of the balance sheet of a commercial bank, then, are :

- (1) Paid-up Capital.
- (2) Reserve Funds.
- (3) Undivided Profits.
- (4) Acceptances.
- (5) Current Deposit and Other Accounts.

**Assets :** (That is, the uses to which the money placed at its disposal by shareholders and depositors, has been put).

<sup>1</sup> “When a bank discounts a bill of exchange, it in fact acquires the bill as an asset, giving in exchange a deposit—*i.e.*, incurring debt to a client. Its liabilities and its assets are increased by the same amount. Its balance-sheet still balances; but its gross income is enhanced by the difference between the sum it pays for the bill and the sum which the bill says is payable at the named date (‘maturity’). This difference is called the ‘discount.’—(R. S. Sayers—Modern Banking, (1939) p. 14.)



The main items on the assets' side are the following :

(1) The bulk of the bank's liabilities, we have seen, are to its depositors who may withdraw their money whenever they choose to do so. Some amount of money, therefore, has to be kept as cash in hand as a provision against such withdrawals. The exact amount of the cash reserve that would be necessary for meeting the calls of the depositors, is obviously unpredictable, but from his experience the banker knows what proportion he should keep in reserve for such withdrawals. Generally, however, the cash reserve which a bank keeps is a certain percentage of its total liabilities to its depositors. The cash in hand, that is, the cash reserve kept for meeting the demand for withdrawals, provides the first line of defence. (This ratio of cash to deposits is called the cash-ratio).

Besides such cash reserve a certain balance is kept by a commercial bank with the Central Bank, as a supplementary reserve, drawn generally by a bank when it is in debt to another. This balance with the Central Bank provides for sudden withdrawals by cheque just as the cash in hand or 'till money' provides for sudden withdrawals of cash.

These two items, *i.e.*, the cash in hand and the balance with the Central Bank constitute the cash reserves of a joint-stock bank.

(2) The cheques in course of collection (the 'float') simply refer to the cheques drawn on other banks and are in course of collection from them.

(3) Money at call and Short Notice :—This item refers to the loans granted by the bank for very short period, that is, the loans given by the bank but are repayable at call, as in the case of advances made to the bill brokers repayable on demand (usually lent on a day to day basis) or, at short notice, as in the case of loans made to the money market at 7 days' notice or to the Stock Exchange, repayable at 14 days' notice.

In times of sudden withdrawals, such loans are called in and hence they are said to provide the bank's second line of defence.

(4) **Bills Discounted**—This refers to the loans made through the purchase of Bills of Exchange which are normally for a period of three months. Bills are self-liquidating and are a very short term advance rarely drawn for a period exceeding three months and provide a very profitable liquid investment. A bank should so arrange its portfolio of bills that some of them mature every week or even every day.

(5) **Advances and loans**—This item refers to the loans made by the bank to the customers. Such advances usually are made against good securities and are renewable every six months. These advances constitute most profitable of the bank's assets as the rate of interest charged on them is usually 1 per cent higher than the Bank Rate with a minimum of 5 per cent.

(6) **Investments**—These refer to the investments in long-dated government securities, industrial shares, etc., and of all assets these are considered as the least liquid. And while in normal times they are marketable and earn handsome income for the bank, when the trade is bad, there is the risk of depreciation. All these assets, excepting the cash, earn some income for the bank and hence, are called the earning assets. Besides these on the assets' side are included Liabilities of Customers for acceptances and premises, which explain themselves.

On the assets' side of the Balance Sheet of a commercial bank, therefore, we have the following items :

- (1) Cash in hand and balances with the Central Bank.
- (2) Cheques in course of collection (the 'float').
- (3) Money at call and short notice.
- (4) Bills discounted.
- (5) Advances and loans.
- (6) Investments.

- (7) Liabilities of customers for acceptances.
- (8) Premises.

The primary motive of a bank is to earn profits and the ability to earn maximum profit depends on its ability in making the most profitable use of these earning assets (excluding, of course, the cash reserves which do not earn any income for the bank). This presents the real problem for the banker: What amount of reserve should he keep and how should he arrange the assets so that not only they earn income but also are themselves kept liquid? For, while insufficient reserve will mean reflection on its solvency and reputation, excess of reserve will mean holding idle money and hence, sustaining loss. Neither is, thus, desirable and hence the onus is on the banker to maintain such a proportion of its total liabilities as cash reserve as will neither be insufficient nor be excess. Much also will depend on the wisdom of the banker's investment policy. Illiquidity at times may be dangerous. Endeavours, therefore, should be made to see that the lure of profit does not blind him to this cardinal principle of banking—to keep the assets liquid, that is, realisable whenever needed. To make them illiquid, in order to earn more profits, may often mean disaster. For, the failure to honour its obligations, that is, to meet its liabilities on demand, may shake the confidence of the public on which the whole edifice of the banking system stands and thus may lead to insolvency. Hence, now-a-days, greater emphasis is put on fixing by law the minimum cash reserve which a bank should be obliged to maintain. It is, however, difficult to know the percentage which may be appropriate, for, the conditions of places may differ widely and much also will depend upon the banker's wisdom and experience. "The practical problem of the banker" observes Keynes, "consists, therefore, in so managing his affairs that his daily accruing assets in the shape of cash and claims shall be as nearly as possible equal to his daily accruing liabilities in these forms."

**Branch-Banking versus Unit-Banking :** Broadly speaking, there are two rival systems of commercial banking, *viz.*,

the branch-banking system of the British variety and the unit-banking system of the American variety.

**Branch-Banking :** Under the branch-banking system, there are a very few big banks, each having a large number of branches scattered all over the country. This system has made much progress in Great Britain and thus is known as the British system. Branch-banking is also prevalent in Australia, Canada, France, etc. In Britain, it may be of interest to note, that a single bank may have as many as 2,000 branches or even more.

Briefly, the advantages of this system of banking are the following. In the first place, since under this system transfer of funds is possible from one branch to another, a comparatively lower cash reserve can be kept in each branch. This obviously secures not only economy of reserves but also even distribution of risks geographically. Secondly, this system facilitates transfer of remittances relatively cheaply. Thirdly, the risk of failure is also less in such a system. Nevertheless, there are certain defects of the system, too. For instance, the number of branches often being very large, the problem of management, supervision and control of these branches often becomes a very difficult one. Secondly, it may lead to excessive concentration of authority at the head office which may be detrimental to the healthy growth of the branches. Transfer of staff from branch to branch which often takes place may also be said to be a defect of this system, since such transfers do not give them the chance to get acquainted with the local people and their conditions.

**Unit-Banking :** Under this system, the operations of the bank are generally confined to a single office though some are allowed to have branches within a strictly limited area. This system is prevalent in U. S. A. where the legal restriction of the area of operations is the outcome of the traditional fear of a "Money Trust."

Such a system, it is argued, does not suffer from certain defects of the branch-banking system, *e.g.*, absentee banking con-

ducted solely with profit motive without any regard to local welfare. Secondly, there is scope, under this system, for close personal contact with the local conditions and people, while under the branch-banking system, the personal element is eliminated. Thirdly, excessive concentration, *i.e.*, centralisation of authority at the head quarters, under the branch-banking system, often leads to monopolistic control, which is undesirable. No such centralisation is possible under the unit-banking system.

The main defects of the unit-banking system are said to be the following. In the first place, diversification of risk, as is done in the branch-banking system, is not possible. Secondly, the branch-banking system provides cheap and widespread banking facilities to the people which this system does not provide. Thirdly, the branch-banking system has another advantage over the unit-banking system, *viz.*, it facilitates mobilisation of funds which is not possible under the unit-banking system.

**Creation of Money by Banks :** The process of creation of credit by banks may be said to be an intriguing part of the whole operation of the banking mechanism. Do the banks create money? We have already seen that deposits may be created in two ways *viz.*, (1) Any body may bring cash and may deposit it with the bank and is credited with a deposit account in its book withdrawable by cheque. This is *deposit of money*. (2) *Deposit of credit* may be issued by a bank to its clients against proper securities, that is, the bank may open a deposit account in favour of such a client whose papers it agrees to discount or whom the banker agrees to make an advance of loan. In any case, either against the mere promise of the client, or against 'collaterals' which may be offered, when the bank advances a loan to the credit of the client—its debts increase by the amount of the loan and since debts of a bank constitute money—the supply of money also increases by the amount of the credit. Banks thus can create deposits by lending more freely as well as can extinguish them by restricting credit. The process of creation of bank deposits,—that is, the debts of the

bank to the public, is essentially an exchange of claims. The members of the public, offer claims of some sort, *e.g.*, securities, etc., and, in exchange the bank offers a book debt called, a bank deposit. Such a claim against the bank, that is, the debt which did not exist previously, can be used in buying goods and services or in settlements of debts, that is, can be used as general purchasing power, and hence it is money and such operations, therefore, add to the total supply of money.

There have been, however, critics of this theory of creation of credit by banks. The late Dr. Leaf,—a renowned practical banker, and Prof. Cannan, for instance, were of opinion that, the initiative in the creation of credit lies with the depositors and not with the bankers. “If any one,” says Dr. Leaf “in the deposit banking system can be called ‘a creator of credit’ it is the depositor.”<sup>1</sup> Similarly, observes Cannan, “every practical banker knows that he is not a creator of credit or money or anything else, but a person who facilitates the lending of resources by the people who have them to those who can use them.”<sup>2</sup>

The arguments of Dr. Leaf and Prof. Cannan, in brief, may be stated thus : The depositors lend their resources to the bank and do not withdraw all their deposits at the same time. The bank only lends the unwithdrawn deposits to the borrower and hence, the banker is merely the middleman between the depositor (lender) and the borrower ; he only re-lends to the borrower what the depositor has lent to the bank. The initiative in the creation of credit, therefore, lies not with the banker but with the depositors.

Recent thinkers, however, hold the opposite view. According to them, the initiative in the creation of credit lies not with the depositors but with the banks. Banks, they say, are the creators of credit. Every loan, according to Withers, “makes

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<sup>1</sup> Leaf—Banking (1928).

<sup>2</sup> Cannan—An Economist's Protest, p. 382.

a deposit." \* When businessmen borrow from the banks by discounting bills, etc., and then lend this borrowed money to the banks by not withdrawing it for a time, they are said to have credit deposits in the banks. These borrowers may, however, withdraw portions of the funds to meet their liabilities to others. When these 'others' are customers of this bank, the money will come back to the bank when they will deposit it with it. In case they are customers of other banks the money will be deposited with those banks. As observes Withers, "the loans of one bank make the deposits of others and its deposits consist largely of other banks' loans." But so long as a loan is due, a deposit equal to the amount of the loan, will be outstanding in the books of some bank or banks. The initiative in the creation of credit, thus, lies with the bankers.

The banks, however, do not have unlimited power of credit creation. The power of creation of credit by a bank is limited by the amount of cash it may have at its disposal. The minimum percentage of cash to deposits which the bank considers safe to keep obviously puts a limit to its power of creation of credit. That is, if it lends more, its reserves will be depleted. Secondly, the total reserves of the banks as a whole will determine the volume of credit which can be created. Thirdly, the capacity of the commercial banks to create credit is ultimately limited by the resources of the Central Bank of the country upon which the banks depend ultimately for their reserves. The Central Bank, by open market operations, that is, by buying or selling securities may increase or decrease the reserves of these commercial banks. "Although" observes Keynes, "it is they (the

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\*Illustration: Suppose, that there is only one bank and it considers it safe to keep a constant reserve ratio between cash and deposit of, say, 10 per cent. Suppose next that a sum of Rs. 10,000 is deposited with it. The bank now keeps a reserve of Rs. 1,000, against this deposit and is in a position to make profit by making advances to customers or by investing in bills, etc., upto an amount of Rs. 9,000. Now, it is possible that if Rs. 9,000 is lent out the whole of this sum of Rs. 9,000 may be withdrawn, but, this is, we know somewhat unusual and thus is unlikely. Those who borrow are more likely to buy goods and services they require and pay for them by

bankers) who create credit, the amounts of it which they create are not arbitrary and are not unlimited. The amounts are governed by the requirements of trade on the one hand, but also by the state of their reserves on the other.”<sup>1</sup> Finally, the amount of cash the public desire to hold is also a factor which limits the power of creation of credit by banks. “For so long as the banks maintain their conventional reserve ratio they can increase their deposits only if the amount of cash in the country increases or the public’s demand for cash diminishes.”<sup>2</sup>

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cheques drawn on the bank. These cheques will be paid into the bank *i.e.*, re-deposited with it and the money will be credited to the accounts of the recipients of these cheques.

As yet, then, no cash has been withdrawn from the bank and hence, the sum of Rs. 9,000 is still at the disposal of the bank. Nevertheless, the deposits of the bank have increased by the value of the cheques, that is, Rs. 9,000. It is thus clear that deposits equal to the sum of Rs. 9,000, have been created by the bank on its own initiative. The process, however, does not cease here but continues. For, against the new deposits the bank keeps a reserve of Rs. 900 and the remaining Rs. 8,100, may be, as previously done, advanced as loans. This again will be redeposited when cheques will be drawn against the loans and, as before, the bank will set aside only ten per cent of the amount as reserve and lend out the balance. Assuming no cash is withdrawn by the public, and the transactions are made by cheques, the bank may, in this way, lend 10 times the original deposit of Rs. 10,000. But the assumption that no cash will be withdrawn is unreal and there is no reason to suppose this. Some cash obviously will be withdrawn for making payments by the borrowers and hence, the bank has to pay cash which it will do by drawing on its reserves. This obviously will put some check to the power of the bank’s creating deposits. But the same process will work when we remove the assumption we made that there is only one bank and assume that there are many banks. For, so long as the banks lend in step with one another and endeavour to keep their reserve ratios constant, it does not make any difference whether there is only one bank or there are many banks. Nor, again, is it necessary that the process should begin only when a sum of Rs. 10,000 is deposited by the public. For, the banks may as well take the initiative and increase their loans without waiting for the public to bring in cash and deposit it. Sooner or later, these loans will again be deposited with the banks. In other words, instead of deposits giving rise to loans, as we have discussed, loans will create deposits when the banks make advances to the borrowers, and the initiative now lies with the banks.

<sup>1</sup> Keynes—A Treatise on Money, Vol. II. (1934), p. 219.

<sup>2</sup> Benham—Economics (4th Edn.), p. 368.



## CHAPTER 31

### CENTRAL BANKING

**Growth of Central Banking :** The growth of Central Banking may be said to be a development of only last few decades. Specially, since the first Great World War of 1914-18, it is being increasingly felt by all monetary authorities that there exists a close connection between the maintenance of financial stability and the existence of a central banking organisation. The existence of a central Bank of Issue in every country was considered so indispensable that the International Financial Conference which met at Brussels in 1920, passed a resolution urging the establishment of a Central Bank of Issue in those countries where no such bank existed. To-day, however, such a Bank of Issue exists in every economically advanced country of the world. The constitutions of these Banks, however, are not the same in all the countries, rather, they vary so much in important matters of ownership and direction, that it is well-nigh impossible to describe a single type as a standard. It may be, perhaps, of some interest to note that earlier, to be specific, in the early twenties, greater stress was given on the 'independent' character of the Central Banks. Central Banks, it was considered imperative, should be free from the control of the state. Later, however, the ideas have veered round and in view of the important functions and responsibilities of the Central Banks, subordination of the Central Banks to the state control has been an accepted practice. Some Central Banks, though originally privately owned *e.g.*, the Bank of England or the Bank of France, are now completely state owned and state controlled. Speaking of the tendency of several Central European countries in the early twenties, observes Sayers, "the 'independence' of central banks became a canon of orthodoxy. All new central bank charters for about ten years after 1922 reflected this reaction ; but more recently there has been spreading a realization that the State has, and must be prepared to assert, ultimate control of the actions of

its central bank.”<sup>1</sup> The need for close harmony between the policy of the Central Bank and that of the government can hardly be over-emphasised to-day. The relation between the Central Bank and the government has been very appropriately described by Mr. Montague Norman in the following way: “I think it is of the utmost importance that the policy of the Bank and the policy of the Government should at all times be in harmony—in as complete harmony as possible. I look upon the Bank as having the unique right to offer advice and to press such advice even to the point of “nagging”; but always, of course, subject to the supreme authority of the Government.”<sup>2</sup>

**Functions of the Central Bank :** “The business of a central bank, as distinguished from a commercial bank, is to control the commercial banks in such a way as to promote the general monetary policy of the State. There are three fundamental points implicit in this : first, a central bank does not, as a commercial bank does, exist to make the maximum profits for its owners ; second, it must have some means of controlling the commercial banks ; and third, it is subordinate to the State.”<sup>3</sup>

The Governor of the Bank of England, in giving evidence before the Royal Commission on Indian Currency and Finance in 1926, has described the functions of a Central Bank in the following way :

“It should have the sole right of note issue ; it should be the channel, and the sole channel, for the output and intake of legal tender currency. It should be the holder of all the Government balances ; the holder of all the reserves of the other banks and branches of banks in the country. It should be the agent, so to speak, through which the financial opera-

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<sup>1</sup> Sayers—Modern Banking (1939), p. 72.

<sup>2</sup> Minutes of Evidence—Royal Commission on Indian Currency and Finance, 1926.

<sup>3</sup> Sayers—Op. Cit. p. 70.

tions at home and abroad of the Government would be performed. It would further be the duty of a central bank to effect, so far as it could, suitable contraction and suitable expansion, in addition to aiming generally at stability, and to maintain that stability within<sup>o</sup> as well as without. When necessary it would be the ultimate source from which emergency credit might be obtained in the form of rediscounting of approved bills, or advances<sup>s</sup> on approved short securities, or Government paper.”<sup>1</sup>

The above description of the functions of a Central Bank obviously indicates the responsibility which rests on the Central Bank of any country in these days. Regulation of the volume of credit and currency, stabilisation of prices, of exchanges and controlling the short-period and cyclical fluctuations and long-period movements of the price-level are the functions which a Central Bank has to perform. In the following paragraphs these functions of a Central Bank have been briefly discussed.

**1. The Central Bank as the Bank of Issue :** Now-a-days there is no disagreement about the principle that the monopoly of note issue should be enjoyed by the Central Bank in order to enable it to exercise desirable control over the volume of currency and credit. Originally, the issue of notes as of other currency was claimed to be a prerogative of the State but with the growth of the commercial banks, while the State decided to retain its prerogative as regards the metallic currency, the business of note issue was handed over to banks. “In some countries the note issue was entrusted to banks owing to the heavy depreciation of, and the consequent loss of public confidence in, notes issued by the State, while in others it was done in return for loans to the State or because the issue of notes was considered more appropriate in the hands of banks than those of the State.”<sup>2</sup> But as with the rapid expansion

<sup>1</sup> Kisch and Elkin—Central Banks (1930), p. 105.

<sup>2</sup> M. H. De Kock—Central Banking (1950) p. 28.

of trade and commerce, the number of banks increased in every country and the note currency came into greater use, the need was felt increasingly for uniformity in the note circulation and for better regulation of the note issue. Hence, specific laws were passed in every country granting one bank either "a complete monopoly of the note issue or a residuary monopoly."<sup>1</sup> The reasons which led to the concentration of note issue of almost every country in a Central Bank, in brief, are the following :

As the notes became more and more the principal form of "hand to hand currency," the need was felt in every country for bringing uniformity in its note circulation and obtaining effective State supervision over a credit instrument, which had, "for the sake of convenience, to be declared by law to be legal-tender money." These objectives could be achieved by conferring the sole right of note issue on the Central Banks. "Although," observes De Kock, "this uniformity and State supervision could also have been achieved by means of a direct State issue, the many examples of depreciation of Government notes in the past and the consequent public distrust of Government issues caused the State to concentrate the note issue in one bank, even if it was in some cases a State bank. In other words, the Governments considered it advisable in the circumstances to exercise their supervision over the note circulation indirectly through a central bank governed by special legislation, rather than directly through a Government Department."<sup>2</sup>

Secondly, with the increasing use of deposit money created by the commercial banks and the growing need for some form of credit control by a Central Bank, "it came to be more gene-

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<sup>1</sup> "A residuary monopoly denotes a case where there are a number of note issuers, but all of these except one are working under narrow limitations, and this one authority is responsible for the bulk of the circulation." Vera Smith—*Rationale of Central Banking*, p. 148.

<sup>2</sup> De Kock—*Op. Cit.*, p. 29.

rally realised that a monopoly of the note issue in itself tends to give a central bank some measure of control over undue credit expansion by commercial banks, since the expansion of credit obviously leads to an increased demand for note currency.”<sup>1</sup> In the absence of any special circumstances, *e.g.*, net favourable balance of payments over a period of years, which provide the commercial banks with sufficient credit balances at the Central Bank, sooner or later, they have to borrow from the Central Bank in order to obtain the additional supply of notes, necessary for the larger payments of wages and salaries arising out of their credit expansion and the consequent increased economic activity, since they cannot issue notes themselves. The concentration of the sole right of note issue in the Central Bank thus gives it a better opportunity to exercise such influence over credit expansion by the commercial banks as it considers to be appropriate under given conditions.

Thirdly, the concentration of the right to note issue in the Central Bank which enjoys the support of the State gives the notes it issues a ‘distinctive prestige’ which proves to be of great help in times of crises or emergencies.

Fourthly, since the issue of notes could, in certain circumstances, be a source of profit and since for several reasons the governments did not prefer to undertake the issue of notes themselves, “it appeared to be more advantageous to concentrate the note issue in one bank and provide for participation in its profits than to leave the right of issue in the hands of several banks, even if they were subject to tax on the amount of their notes in circulation.”<sup>2</sup>

These are, in brief, the main reasons for the concentration of the note issue of almost every country in a Central Bank. As regards the methods of regulation of note issue we have already discussed the principal methods earlier.

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<sup>1</sup> Ibid—p. 29.

<sup>2</sup> De Koek—Op. Cit., p. 30.

**2. The Central Bank as the Government's Banker :** The Central Bank every where acts as the banker, agent and adviser of the Government. As the banker of the government, it has to perform various functions *viz* : it conducts the banking accounts of the government, and carries out the government's transactions involving purchases or sales of foreign currencies, etc. It also provides the government with foreign exchange whenever necessary *e.g.*, to meet its external debts or purchase of goods, etc. Besides these banking services, the Central Bank also performs various agency services for the State, for example, in those countries which have introduced exchange stabilisation or exchange equalisation funds, or payments or clearing agreements with other countries, the Central Banks are entrusted with the administration of these funds and agreements, and they keep separate banking accounts for these purposes and carry out all the transactions in gold and foreign exchange which may be necessary. Similarly, the Central Bank also acts as the government's agent where general exchange control, whether as a war or other emergency measure, is in force. "The Central Bank operates as the Government's banker, not only because it is more convenient and economical to the government, but also because of the intimate connection between public finance and monetary affairs. The State is in every country the largest receiver of revenue and has in most countries also become the biggest borrower ; and its expenditures have come to play an increasingly important part in the economic life of the nation. The central bank, on the other hand, is charged with the duty and responsibility of controlling or adjusting credit in the national economic interest and carrying out the monetary policy adopted by the Government. As the manifold financial activities of the State can in certain circumstances exercise a disturbing influence on money-market conditions and exchange rates and counteract the credit policy of the central bank, the centralisation of Government banking operations in the central bank at least gives the latter a better opportunity of judging the

general financial situation at any time, giving the appropriate advice to the Government and taking the necessary remedial measures.”<sup>1</sup>

**3. The Central Bank as the Bankers' Bank :** The Central Bank is the custodian of the cash reserves of the Commercial banks of a country and acts as the bankers' bank. The commercial banks of the country are required to keep certain balances with the Central Bank. Such centralisation of the cash reserves in the Central Bank has great advantages. For instance, centralised cash reserves are a source of great strength to the banking system of the country and, can certainly serve as the basis of a larger and more elastic credit structure than would be possible if the same amount were scattered among the individual banks. “It is obvious that, when bank reserves are pooled in one institution which is, moreover, charged with the responsibility of safeguarding the national economic interest, such reserves can be employed to the fullest extent possible and in the most effective manner during periods of seasonal strain and in financial crises or general emergencies.”<sup>2</sup> Secondly, such centralisation of cash reserves ensures economy and liquidity of the banking system and of the credit structure of the country as a whole, although in an indirect way. Such economy, elasticity and liquidity are promoted because not only it is the function of the Central Bank to rediscount but it is also the lender of the last resort. In the absence of a Central Bank and centralised reserves, the commercial banks would have to carry more cash in order to cope with seasonal strains and possible emergencies than would be necessary if there were a Central Bank from which they could, directly or indirectly and individually or collectively, obtain the necessary accommodation at such times. “In short, with a central bank to fall back upon in case of need the commercial banks can with safety conduct either a larger volume of business with the same cash

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<sup>1</sup> De Kock—Op. Cit., pp. 48-9.

<sup>2</sup> Ibid—p. 60.

reserve or the same amount of business with a smaller reserve than if they have to depend only on their own individual resources and on such money market facilities as are available. The important point about centralised cash reserves is, however, that they serve to increase the capacity of the central bank to rediscount or otherwise create credit for the purpose of meeting the cash requirements of the commercial banks or of the money market generally.”<sup>1</sup> •

It has, however, been often remarked that, since the commercial banks are obliged to maintain minimum balances with the Central Bank, the latter, that is, the Central Bank is morally obliged not to compete directly with them, for, that would mean using their funds against them and it is possible for the Central Bank to under-quote them since it does not have to pay any interest on their deposits. It is true that while the Central Bank carries on the banking business on its own account the argument cannot be said to be without some amount of truth in it. Nevertheless, it should be noted that the Central Bank's lending power is not dependent entirely or directly upon its bankers' deposits. Instead, it derives its lending capacity mainly from its special power to create legal tender money. “It is true that at least part of the central bank's holding of gold and foreign exchange may be regarded as having come into its possession and remaining under its control because of the balances which the commercial banks keep with it, and that normally the lending power of a central bank is limited by a statutory requirement of minimum gold or gold and foreign exchange reserves. Within this limit, however, the central bank also derives its lending capacity from its special power to create legal-tender money. In any case, the central bank's gold and exchange reserves were acquired from its issue of notes as well as from its bankers' deposits.”<sup>2</sup> Besides, the capacity of the Central Bank to compete with the commercial banks is not so great as it appears to be. For, it is required to maintain a

<sup>1</sup> De Kock—Op. Cit., p. 70.

<sup>2</sup> Ibid—p. 80.



higher reserve ratio to its liabilities than the commercial banks have to do and this limits its power to compete with the commercial banks. Finally, increased creation of credit (as a consequence of such competition) by it is sure to increase its liabilities and would tend to be reflected in an increase in bankers' deposits with the Central Bank, in the deposits of its private customers and also in its note circulation. But whichever form it takes, it would obviously represent an increase in the potential claims against the Central Bank.

**4. The Central Bank and the maintenance of the Monetary Standard :** As the bank of issue and the custodian of the cash reserves of the commercial banks, the Central Bank automatically assumed the function of holding the nation's metallic reserves. The Central Bank acquired its holding of metallic reserves and, also in many cases of foreign exchange, "as a counterpart of its issue of notes and its custody of the commercial banks' surplus cash, the latter two functions being reflected in the liabilities of the central bank, and the former in its assets."<sup>1</sup> And it is but natural that as a custodian of nation's metallic reserves it automatically had to accept the responsibility of safeguarding the value of the national currency and maintaining the monetary standard of the State. In order to maintain the external value of its currency the Central Bank is obliged to maintain sufficient gold, when the country is on the gold standard, or adequate reserves of foreign exchange, if the country is on inconvertible paper. Such holding of gold and foreign exchange is necessary so that it may have at its disposal adequate reserve of international currency to meet at any time an adverse balance of payments and for maintaining the external value of its currency. To the extent, however, it is legally obliged to maintain a minimum reserve against the notes it issues or against both its notes and the deposit liabilities, its holding of the gold or foreign exchange is immobilised, that is, not available for the purpose of

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<sup>1</sup> De Koek—Op. Cit. p. 83.

balancing international accounts. "The existence of a reserve requirement," as observes De Kock, thus, "renders it necessary for a central bank to hold two different kinds of reserves, the one an internal or impounded reserve (*i.e.* against the domestic monetary circulation) and the other an external or free reserve (*i.e.*, freely available for active use as international currency)" <sup>1</sup> And the principal purposes which the minimum requirement was designed to serve were, firstly, to maintain confidence in the currency at home as well as abroad and, secondly, to set a limit to the expansion of credit.

**5. The Central Bank—the Bank of Rediscount and the Lender of the Last Resort :** The function of re-discounting <sup>2</sup> is significant in that it provides the commercial banks and other credit institutions, whenever they desire to increase their cash resources, with additional or alternative means for the conversion of certain of their earning assets into cash. In other words, they are assured that provided they offer suitable paper to the Central Bank for rediscount or collateral loans, they can maintain their liquidity and hence also their ability to meet withdrawals. The real significance, therefore, of re-discount lies in the fact that it "increases the elasticity and liquidity of the entire credit structure." Besides, the provision of rediscount facilities by the Central Bank also secures economy in the use of bank cash and enables the banks individually, as well as collectively, to conduct their business with smaller cash reserves, that is, smaller than would be necessary, if they were to depend only on their own resources and the facilities of the money market. There, again, is the question of emergencies. Individual banks, in the absence of a Central Bank, would be obliged to keep a substantial cash reserve for meeting emergencies, whereas, a much smaller cash reserve will be sufficient, if there is a Central Bank to fall back upon, in the case of sudden requirement or emergency.

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<sup>1</sup> Ibid—p. 95.

<sup>2</sup> By rediscounting is meant, "the conversion of bank credit into central bank credit."—Willis—The Theory and Practice of Central Banking.

As a lender of the last resort, on the other hand, it is the responsibility of the Central Bank to meet, directly or indirectly, all reasonable demands for accommodation from the commercial banks, or other credit institutions, subject, however, to the terms and conditions which constitute the discount-rate policy of the Central Bank. Nevertheless, it should be noted that the increased elasticity and liquidity which rediscounting by the Central Bank affords to the credit structure should in no way be abused. The banks, for instance, should not so economise in their cash reserves as to require accommodation from the Central Bank during the large part of the year, that is, even in times of normal business activity. They should not, that is to say, use the rediscounts as permanent capital and keep so insufficient cash reserves as to be unable to meet abnormal demands. "Moreover, the central bank itself should aim at maintaining a position of great strength and liquidity in normal times in order not only to cope with unusual seasonal demands for credit, but also to deal effectively with emergencies and periods of general financial strain. Thus, while the central bank should have wide rediscounting and lending powers, it should in normal times be restrictive rather than liberal in its qualitative requirements as to bills eligible for rediscounts and loans, so that a safe margin would be available for abnormal times." <sup>1</sup>

Besides, the Central Bank in every country endeavours in various ways to improve the processes of clearance, settlement and transfer.

**6. The Central Bank as the Controller of Credit :** Credit has come to play so predominant a part in the settlement of monetary and business transactions in the advanced countries of the world to-day, that they may as well be said to be based on a credit economy rather than a money economy. Any abuse of credit, therefore, is sure to lead to many evil consequences, both from the social and economic point of view. It has been therefore acknowledged on all hands that the crea-

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<sup>1</sup> De Kock—*Op. Cit.* p. 109.

tion and the distribution of credit should be subjected to some control. There, however, seems to exist some disagreement as to the specific purpose for which credit should be controlled. Under gold standard, for instance, the maintenance of stable exchange rates was the aim<sup>o</sup> of credit control. Exchange stability, it was held, was of utmost importance for the maintenance of international confidence and also for the conduct of the international trade on the largest possible scale which, in its turn, it was believed, would maximise the economic welfare of the world. Hence, the levels of commodity prices, production and trade within the country were regarded as subservient to the need of maintenance of the stable exchange rates.

When, however, the gold standard was abandoned, greater importance was attached to the stability of the prices and it was agreed that the main object of credit control, should be, to secure stabilisation of the domestic prices which, it was thought, would be most conducive to the national economic welfare. The reasons were obvious. Firstly, the fluctuations in the price-levels cause considerable disturbances in the economic relationships *e.g.*, in the relationship between the creditors and the debtors, or, between the employers and the employees, etc. Secondly, insistence on the maintenance of the stable exchange rates may at times mean placing the country at the mercy of the monetary authorities of other countries. For, inflation and deflation elsewhere (specially if they are predominant countries) will have repercussions in the country maintaining fixed rates of exchange with them.

In recent times, however, the emphasis has been shifted to the primary need of elimination or smoothing out of the business cycles. The aim of credit control should be, it is held by many economists to-day, to prevent booms and slumps and to ensure a steady rate of growth in the general economic activity of the country. It is believed that the relative economic stabilisation, even at the risk of fluctuations in the price-level or in

exchange rates and gold parities, is more conducive to the national economic welfare.

The present-day tendency may be said to be to combine the objective of international exchange stability with that of promoting and maintaining high levels of employment and real income in the country.

**Methods of Credit Control :** The principal methods by which the Central Bank may control or adjust the credit are the following :

(i) By lowering or raising the discount rate and the interest rate with a view to encouraging the expansion or contraction of credit ;

(ii) By buying or selling securities, bills of exchange in the open market with a view to putting more money into the market or withdrawing money from the market and thus to expand or contract credit ;

(iii) By changing the commercial banks' cash reserves with it ;

(iv) By rationing of credit ;

(v) By changing the margin requirements on security loans ;

(vi) By regulating the consumer credit ;

(vii) By the use of moral suasion and publicity.

**(i) The Bank Rate Policy :** The minimum rate at which the Central Bank discounts the first class bills of exchange or advances loans against approved securities is known as the Bank-rate, or in some countries, as the Discount rate.<sup>1</sup>

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<sup>1</sup> The rate at which the money market, *e.g.*, the discount houses, joint-stock banks, etc., discounts approved bills of exchange is called the 'Market Rate.' In Great Britain, the Bank-rate refers to that rate at which the Bank of England discounts three months' bills of a specified type and it is generally higher than the Market rate of discount, since the idea is that the Bank of England is only prepared to give accommodation in the last resort, that is, when all other resources have been tapped. The money market conditions determine the relationship between the Bank-rate and the Market rate of discount.

How changes in the Bank-rate affect a country's balance of payments position and the domestic economy? <sup>1</sup>

It is the concern of the Central Bank of a country suffering from an adverse balance of trade to prevent the outflow of gold which is likely if the country continues to import more than it exports (assuming, of course, that there exists gold standard). It is necessary to stop this export of gold due to adverse balance of trade, for, unless prevented, this will deplete the gold reserve of the Central Bank. By raising the Bank-rate, the Central Bank prevents this gold outflow and may even succeed in attracting gold from other countries. How? Because, in the first place, higher Bank-rate will mean increased demand for the country's currency by the foreigners who can obtain higher rate of interest in that country than elsewhere and who, therefore, not only do not withdraw their money from the country but will increase their short-term investments in that country in order to earn higher rate of interest. The demand for the currency of the country raising the Bank-rate thus increases and hence its value in terms of foreign currencies rises. The rates of exchange become favourable for it and this will obviously tend to stop the outflow of gold and even may result in an inflow of gold.

Secondly, higher Bank-rate will also mean less borrowing and less investment within the country leading to a fall in the prices and a fall in employment and the money incomes of the people. The fall in the money incomes will mean, in the first place, a decline in the amount which the people spend on imported goods and hence, will lead to a fall in the volume of imports. And secondly, some of the domestic goods whose prices have fallen and the demand for which has declined, will now be available for export. The total result of all these, thus, will be a turn in the balance of trade, that is, the balance of trade will now tend to be favourable.

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<sup>1</sup> Hawtrey—Keynes controversy discussed in p. 399.

A higher Bank-rate will affect the domestic economy of a country in the following way. The immediate effect of a higher Bank-rate will be to retard investment since it will mean higher cost of borrowing. Production of investment goods will decline leading to a decline in employment in investment goods industries. Incomes will fall and consumption will decline. Diminished consumption will lead, in its turn, to a fall in the price of the consumption goods. The stockists and dealers, who usually do their business by borrowing, will be apprehensive of further fall in prices, and hence, will curtail their orders firstly, because the higher rate of interest will mean for them higher cost of borrowing and, secondly, because of the chance of loss due to further fall in the prices. Profits, at first in the investment goods industries and subsequently in the consumption goods industries will disappear. The productive activities will be retarded and ultimately all-round business depression will set in. Falling prices and growing unemployment will lead to a decline in the rates of earnings and so, to a fall in the cost of production and the process will continue until the producers think it profitable again to produce at a lower cost and sell at lower prices.

Of course, the interval of time between the raising of the Bank-rate and the decline in the costs may be considerable. But the process will bring the desired result *viz.*, prevent the outflow of gold and will turn the unfavourable balance of trade into a favourable one by successive stages, beginning from attracting the short-term funds into the country till the decline in the costs and money incomes of the people may pave the way for inflow of gold into the country.

Conversely, a lowering of the Bank-rate by the Central Bank will create easy money conditions and produce results which are the reverse of those discussed above.

In recent times, however, the importance of the Bank-rate policy has considerably declined both as a method of credit control and as an instrument for correcting international disequilibrium. The reasons, in brief, are the following. In the

first place, radical changes have taken place in the technical money market conditions and also in the economic structure. For instance, in recent times the importance of bill of exchange has considerably declined as an instrument for financing trade and short-term requirement of industry and agriculture and hence, the importance of the Bank-rate has also to that extent declined. Secondly, increased use of other methods of credit control, *e.g.* open market operations, alteration of the reserve ratio of the commercial banks, etc., which are more advantageous because of their greater directness and adaptability in certain circumstances. The Bank-rate method, as we have seen, is indirect and takes considerable time to have the desired effect. Thirdly, maintenance of cheap money as a matter of public policy now-a-days, is also a cause of the decline of the importance of the Bank-rate.

With the abandonment of the gold standard in the early thirties by the countries of the world and adoption of such methods of credit control as the Exchange Equalisation Account, Exchange Control, Clearing Agreements, etc., the Bank-rate has ceased to have any importance as a regulator of the gold movements. Finally, it is now being increasingly felt that although the Bank-rate policy succeeds ultimately in removing the causes of mal-adjustments in a country's balance of payments, it does so by causing considerable human sufferings which are inevitable because of the depression and the large scale unemployment it necessarily entails. Now-a-days, more importance is attached to internal stability than to external stability which is sought to be maintained by other direct methods as Exchange Control, Exchange Depreciation, etc., instead of plunging the country into a deflationary spiral with all its attendant evils and miseries.

**Hawtrey- Keynes Controversy :** The two eminent monetary economists, Hawtrey and Keynes, hold different views regarding the way in which the changes in the Bank-rate influence prices and production. In brief, the views of Mr. Hawt-



rey and Lord Keynes, both of whom agree that the changes in the Bank-rate influence the volume of economic activity but who differ as to the exact manner in which such changes influence the prices and production, that is, the economic activities, may be stated as follows :

Mr. Hawtrey holds that the influence of the short-term rate on the dealers' activities is the mainspring of change. It is the short-term rate of interest which, according to him, directly determines the dealers' activities, that is, influences their willingness or otherwise to hold stocks of working and liquid capital goods, that is, the semi-finished goods. In other words, the activities of the dealers who usually work with borrowed capital are determined directly by the short-term rate of interest. A higher Bank-rate would mean increased cost of holding such stocks of finished or semi-finished goods. Dealers, therefore, will reduce their stocks and also will curtail their orders with the producers whose total sales, therefore, decline. The producers, now that they see that the sales are declining, may, with a view to induce the dealers to buy more, lower the price or may choose to produce less, that is, curtail their output.<sup>1</sup> Decline in the volume of output means a decline in the volume of employment offered to the factors of production, that is, in other words, a decline in the output will result in unemployment of some of the factors of production. This leads to a contraction of the money incomes (either because the rates of the earnings have fallen or because of the number of men earning money incomes has fallen) which, in its turn, leads to a fall in the retail sales of goods. The dealers are thus forced to curtail their orders still further and the producers, because of the heavy decline in the sales, no more dare increase their stock of fixed capital goods. The demand for investment goods falls leading thus to a depression in the market for these goods. Prices fall and the output is curtailed. The volume of employment declines

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<sup>1</sup> The producers' decision, of course, will depend upon the shape of their cost curves.

and the total money incomes contract, giving rise, thus, to the vicious circle of deflation. Conversely, a fall in the short-term rate of interest will reduce the cost of holding stocks and will, therefore, encourage the dealers to hold more stocks and place more orders with the producers and thus would stimulate productive activities leading to a rise in prices and an increase in the volume of employment, and ultimately to the vicious circle of inflation.

Keynes, however, holds a different view. According to him, the main effect of Bank-rate changes on the internal economic situation comes not through the changes in the short-term rates of interest and in the stocks of working capital goods but through the changes in the long-term rates of interest and the volume of fixed capital goods. Keynes focusses attention on the long-term rate of interest, because, according to him, the demand for the working capital is not so sensitive to changes in the short-term rate of interest. The demand for working capital depends on the general situation which is determined by the entrepreneurs' demand for fixed capital goods. The changes in the long-term rate of interest, however, are always associated with the changes in the short-term rate of interest. That is, the long-term rate of interest will change when the Bank-rate changes and will change in the same direction. This is so, because a rise in the short-time rate of interest relatively to the yield in the long-term securities will make the short-term securities relatively more attractive and hence, more will be invested in these securities. That is, the owners of the long-term securities will sell these securities and buy short-term securities. This will lead to a fall in the prices of the long-term securities, that is, to a rise in their yield. Conversely, a fall in the short-term rate will be followed by a fall in the long-term rate.

Now, just as a change in the short-term rate of interest affects the willingness of the dealers to hold the stocks of finished and semi-finished goods, similarly, a change in the long-term

rate of interest affects the willingness of the producers to hold the stocks of capital goods. The volume of investment in fixed capital goods depends on the prospective profits from such investments and the long-term rate of interest. New investment or replacements of existing capital will become less profitable when the long-term rate of interest rises. Changes in the long-term rate of interest, thus, will affect the investment market and the higher the rate of interest the less attractive becomes the capital investment. Consequently, investment in fixed capital goods will shrink leading to a decline in the employment in the capital-goods trades and in the total money incomes and a fall in prices. Consumers adapt themselves to this shrinkage of money incomes, partly by saving less and also partly by spending less on current consumption. Consequently, employment in consumption goods trades declines. Prices of these goods register a fall and the production declines and thus sets in an all-round depression. The opposite results will be produced when the long-term rate of interest falls. That is, increased employment in capital goods industries, higher money incomes, increased savings and more expenditures on consumers' goods, rising prices and all these eventually leading to a vicious inflationary expansionist movement. The efficacy of the long-term rate of interest in any case, however, depends on the elasticity of demand for capital and much also depends on the general frame of mind of the people about the future.

**Conclusion :** The difference between Mr. Hawtrey and Lord Keynes as to the exact manner in which the Bank-rate works and affects prices and production is thus clear. While Mr. Hawtrey lays more stress on the short-term rate of interest and the behaviour of the dealers in holding the stocks of finished and semi-finished goods in response to the changes in it, Mr. Keynes, on the other hand, lays stress on the part played by the long-term rate of interest in influencing the entrepreneurial activities in relation to fixed capital or investment goods. It may be stated about the view of Mr. Hawtrey that his theory

seems to give more stress than what should be given on the part played by the interest payment. For, the payment of interest is only one among many factors in the total cost of holding goods. Hence, a rise or a fall in the Bank-rate is hardly likely to affect the dealers' decision in so important a way as he seems to assume. Besides, the behaviour or the response of the entrepreneurs in different economic situations is also an important factor which hardly can be ignored. Productive activities and, therefore, prices depend more on their attitude than on the rate of interest, which, as we have seen, constitutes only one among various factors which govern the volume of new investment either by the dealers or by the entrepreneurs in the working or in the fixed capital goods. Finally, as has been observed appropriately by Sayers, "these two explanations of the effect of banking policy upon prices and production are not mutually exclusive; a fall in short-term rates may well *both* stimulate additions to stocks *and* lead to a fall in long-term rates which will stimulate investment in fixed capital. The difference is one of emphasis only."

(ii) **Open Market Operations :** The term open market operations,<sup>1</sup> in the wider sense may be said to cover the purchase or sale by the Central Bank in the market of any kind of paper in which it deals, that is, it includes purchases or sales of securities, government and other, or bankers' acceptances or foreign exchange generally. The object of open market operations is to achieve the desired expansion or contraction of money and credit; the Central Bank buying securities when it favours expansion and selling securities when it deems contraction is necessary. The theory of open market operations may be stated thus. When the Central Bank buys or sells securities, the direct and immediate effect of such purchases or sales

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<sup>1</sup> In Great Britain and America, where the markets for Government bonds and Treasury bills are sufficiently broad and active for all the purposes of open market policy and the Central Bank takes the initiative in the purchases and sales of Government securities, the term is applied only to the purchase or sale of the Government securities, both long-term and short-term.

will be an increase or a decrease in the quantity of bank money in circulation and in the cash reserves of the commercial banks. For, when it buys securities, it pays the sellers which money is deposited by the recipients in their banks leading thus to an increase in their cash reserves and enabling them to lend more. Similarly, when it sells securities, the buyers pay by drawing cheques on their banks, which, when cashed, deplete the reserves of the banks who are thus compelled to curtail their lending. In short, thus, as a result of buying or selling of securities by the Central Bank the commercial banks whose cash reserves swell or deplete, endeavour to increase or decrease the quantity of bank money. And the changes in the quantity of money bring about relative changes in the money rates and the credit conditions which ultimately bring about the desired adjustments in the internal levels of prices, costs, production and trade.

The immediate impact of the open market operations, thus, is on the deposits of the commercial banks with the Central Bank as well as on the customers' deposits with the commercial banks. When, for instance, the Central Bank sells securities they are bought either by the commercial banks themselves or by the public who are customers of the commercial banks. Since the payments are effected through debits to the bankers' accounts with the Central Bank, the deposits of the commercial banks with the Central Bank will be reduced by the amount equal to their purchases of these securities, i.e., to the extent they buy these securities. Similarly, the customers' deposits with the commercial banks will be reduced to the extent they buy these securities and the cheques drawn on these banks are cashed. Conversely, when the Central Bank buys securities it will result in an increase in the commercial banks' cash reserves with the Central Bank and also in an increase in the customers' deposits with the commercial banks to the extent they sell these securities.

**Limitations:** By open market operations, it is, therefore, possible to bring about stabilisation of prices or business acti-

vity or at least to prevent substantial deviation of prices or business activity from the desired level. But certain things are necessary for the successful operation of the open market operations. For instance, the quantity of money in circulation as well as the cash reserves of the commercial banks should increase or decrease at least approximately to the extent desired by such operations by the Central Bank. Secondly, the commercial banks should endeavour to increase or decrease their loans and investments according as their cash reserves increase or decrease (that is, lower or raise their rates of discount in accordance with the increase or decrease in their cash reserves) and thirdly, the demand for bank-credit will increase or decrease in response to the lowering or raising of the money rates.

Normally, such relationships exist or at least, as Dr. Kock observes, there are strong tendencies in the direction of such relationships but not infrequently, deviations occur from the normal and alter the relationships. In the first place, buying or selling of securities by the Central Bank may not lead, as desired, to a proportionate increase or decrease either in the quantity of money in circulation or in the cash reserves of the commercial banks. For instance, when the Central Bank buys securities the effects of the purchases may be neutralised, partly or wholly, if simultaneously there takes place an outflow of capital or there exists an unfavourable balance of payments or notes are withdrawn by the people for hoarding purposes. Similarly, the contractionist effects of sale of securities by the Central Bank may be neutralised if there is a favourable balance of payments or if the people release the amount they had hoarded earlier. Secondly, the commercial banks do not always expand or contract their credit when their cash reserves increase or decrease. Changes in their credit base may not, that is to say, bring about corresponding changes in the volume of credit that is actually created. For, there may be economic, political or monetary reasons for which the commercial banks

may refrain from employing the increased reserves fully or from contracting credit when the reserves are reduced.<sup>1</sup>

Thirdly, it is conceivable that as a result of an increase in their cash reserves, although the commercial banks themselves are willing to expand credit, there may be reluctance on the part of the public to borrow. An increase in the credit base, therefore, may not necessarily lead to an increase, at least proportionately, in the expansion of credit by the commercial banks. For example, in times of depression or of economic or political uncertainty, the entrepreneurs may not be willing to borrow and, hence, full employment of the cash reserves may not be possible by the commercial banks. Conversely, in periods of booms when there are the prospects of higher profits, even though the money rates rise owing to a decrease in the credit base, the demand for bank accommodation may not decrease. A higher rate of discount, that is to say, may not have any deterrent effect on the credit condition, if the entrepreneurs, speculators, and investors are confident of better prospects and, therefore, are eager to make greater use of credit notwithstanding the higher rate. Both inflation and deflation, we know, when left to themselves, gather momentum very quickly since both optimism and pessimism feed on themselves.

Whatever the limitations, the open market operations, as a special form of creation or cancellation of Central Bank credit surely constitute an effective method which can be utilised by the Central Bank whenever it deems necessary. It is superior to the Bank-rate method in more than one way. In the first

<sup>1</sup> Supposing the cash ratio which should be maintained by them is 10 per cent. An additional cash reserve of Re. 1 will ordinarily serve as a basis for the creation of credit to the extent of Rs 10. But there may be, as we have seen, deviations from the normal course. The banks, for instance, may apprehend that expansion of credit may lead to hoarding by the people, and hence, no such multiple credit expansion is possible. An additional cash reserve of Re. 1 will only lead to an expansion of credit by Re. 1 (i.e. an additional cash reserve of Re. 1 providing only Re 1 of currency). Such possibility, therefore, may deter the commercial banks from expanding their credit proportionately to the increase in their cash reserves.

place, the Bank-rate method primarily affects the short-term rate of interest and only indirectly the long-term rate of interest but the open market operations have a direct and immediate effect on the supply of money and credit and hence, on money and interest rates generally. Secondly, there is a greater chance of the Central Bank's policy of expansion being successful under open market operations than under re-discounts. For, in some countries the commercial banks observe a greater caution whenever they are indebted to the Central Bank even though the latter is willing to expand credit and hence, does not raise the discount rate or the rate of interest.

Open market operations, thus, constitute a more direct and more comprehensive instrument of credit control provided, of course, "there are broad and active markets in the types of short-and long-term securities in which the central bank can legitimately deal, and that such securities constitute a sufficiently sensitive and decisive part of the whole capital or credit structure." <sup>1</sup>

**(iii) Changes in the Commercial Banks' Minimum Cash Reserves :** With a view to enable the Central Bank to have still greater control over the money market as well as to enable it to control the capacity of the commercial banks to expand or contract credit, one more power has been given to the Central Banking authorities *viz.*, the power to decrease or increase the minimum cash reserves which the commercial banks are required to keep with it. The Central Bank might not find it always possible or profitable to engage in open market operations, *e.g.*, when there is a shortage of securities it wants to buy or sell or, again, when it considers it unprofitable to buy securities at higher prices or to sell securities at lower prices. Under such circumstances, the power given to the Central Bank to decrease or increase the minimum cash reserves which the commercial banks are required to keep with it, ob-

<sup>1</sup> De Kock—Op. Cit. p. 199.



viously helps it to increase or decrease the available supply of bank cash.

In U. S. A. use has been made of this method by the Federal Reserve System on more than one occasion<sup>1</sup> to neutralise the effects of excess cash reserves of the member banks. Other countries viz., New Zealand, Mexico, Sweeden have also made use of it and in these countries suitable legislations have also been passed.

So long as the member banks possess volume of reserves far in excess of the legal requirements, the instruments of open market operations or discount-rate may prove to be ineffective. Hence, the power to change the reserve requirements of the commercial banks to be kept with the Central Bank gives it an additional weapon to be used to bring about the desired changes in the available supply of the bank cash. And it is likely to be adopted as an alternative to other policies (*e.g.*, open market operations) when they cannot be undertaken effectively or as a supplement to them in order to "strengthen the technique of central banking control under highly-liquid monetary conditions or, conversely, under conditions of severe credit stringency." Nevertheless, there are limitations of this method also. For instance, as has been pointed by Burgess, when there are excess reserves, "the surplus of reserves is not distributed evenly among the banks of the country (some banks have more excess, some less, and a few have none)" and it is, therefore, likely that "when reserve requirements are increased some banks will be hit much harder than others."<sup>2</sup> Secondly, like open market operations, the changes in the reserve requirements also have, "the effect of increasing or de-

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<sup>1</sup> Under the Banking Act of 1935, the Board of Governors of the Federal Reserve system has been empowered to change the reserve ratios of the member banks with a view to prevent injurious expansion or contraction of credit by them. Accordingly, to prevent undesirable expansion of credit, the Board increased the reserve ratios of the member banks, once in August 1936, and again in March, 1937.

<sup>2</sup> Burgess—Reserve Banks and the Money Market (Harper), p. 260.

creasing the available supply of bank cash, but such changes in bank cash do not always bring about corresponding or proportionate changes in the volume of credit actually created, either because commercial banks do not always seek to increase or decrease their loans and investments in accordance with the increase or decrease in the available supply of bank cash, or because the scope or demand for bank credit does not always increase or decrease in accordance with such increase or decrease and the lowering or raising of money rates which may result therefrom.”<sup>1</sup>

Hence, although the method is a useful one in bringing about the desired changes in the available supply of bank cash much moderation and discretion are necessary for its application to achieve the desired result.

(iv) **Rationing of Credit :** Rationing of credit, as a method of controlling the volume of credit by the Central Bank, has an advantage over the other methods in that by the use of this method the Central Bank can control the purposes for which credit may be obtained. The Central Bank, while it uses this method, lays down definite credit quotas to which the business demand for loans has to submit.

Certainly this method is effective in checking undesirable expansion. Nevertheless, much depends upon the wisdom of the Central Bank in so far as the decision rests with it for making selection of rival claims of different types of business.

Credit rationing is also useful in that the Central Bank, by such rationing, may discourage the granting of loans to stock exchanges by refusing to discount the papers of the banks if it considers that these banks encourage speculation by advancing loans to speculators.

Some times the Central Bank takes direct action, i.e., coercive measures against some commercial banks or other financial institutions. That is, it may refuse to re-discount for those banks whose credit policy is regarded as being inconsistent with

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<sup>1</sup> De Kock—Op. Cit., p. 250.

the maintenance of sound credit conditions. Or, again, the Central Bank may refuse to grant further re-discounts to banks whose borrowings from it (*i.e.*, the Central Bank) are considered to be excessive in relation to their capital and reserves. Often, again, the Central Bank may decide to charge penalty rates *i.e.*, rates over and above the official discount rate.

From the theoretical point of view, such coercive measures may seem to secure better qualitative distribution of the bank credit. In practice, however, direct action can hardly be said to be very effective. In the first place, the element of force associated with it is not conducive to the attainment of positive results and secondly, it is often difficult for the commercial banks themselves to control the ultimate use of credit.

**(v) Changes in the Margin Requirements on Security Loans :** As an additional weapon to control, in particular, the volume of credit used for speculation in securities, the Central Bank, under this method, is given the power to prescribe rules and regulations with respect to the amount of credit that can be extended by banks against securities for the purpose of carrying or trading in them and also with respect to margins for loans by brokers to their customers.

The Federal Reserve system of the U.S.A. under the Securities Exchange Act of 1934, has been given such power. This method obviously checks the use of credit for speculative purposes.

**(vi) Regulation of Consumer Credit :** As an additional instrument for exercising desirable control over credit, the Board of Governors of the Federal Reserve system of the U.S.A. was given the authority in 1941, to regulate the terms and conditions under which credit repayable in instalments might be extended for purchasing or carrying consumers' durable goods.

This method of instalment credit regulation is useful in checking inflationary price rises during war by curbing the demand for consumers' goods the civilian supply of which is

considered necessary to be reduced, because of the greater defence needs. For, it will mean less purchasing power available for consumer expenditures. This method may also be advantageously used during peace time to check undesirable rises in the prices of consumers' goods.

**(vii) The Use of Moral Persuasion and Publicity :** Not unoften the Central Bank exercises considerable influence though indirectly, over the credit<sup>\*</sup> policy of the commercial banks by appealing to their good senses, that is, by 'moral persuasion.' Such persuasion becomes effective when the leadership of the Central Bank is generally accepted and the number of banks is not too large (in which case, close relationship between these banks and the Central Bank may not exist).

In some countries, specially in U.S.A., publicity is also used as an instrument of policy. The Central Banks in these countries regularly publish weekly statements of their assets and liabilities, monthly reviews, and credit and business conditions, etc. It is, however, difficult to judge the efficacy of publicity as a method of control. Nevertheless, in view of the increasing public interest and intervention in matters of monetary and banking policy, some publicity by the Central Bank may be considered as helpful and also necessary.

**Bankers' Clearing House :** When there are many banks in any given place, it is likely that each one of them will receive cheques drawn on others and deposited with it for collection. A Bankers' Clearing House is an organisation of the banks of a given place, formed with the purpose of offsetting the cross-obligations in the form of cheques (on each other received by them in the course of their day's business transactions). The representatives of each bank bring these cheques (*i.e.* the cheques each has received against others) to the Clearing House and it is the function of the Clearing House to offset the claims of each bank on the others. When, however, the balance is against a bank, it pays that amount to the Clearing House and

when it is in its favour, it receives from the Clearing House the amount of the balance. A settlement, that is to say, is thus made by payment of the difference.

Usually, the Central Bank, that is, the leading bank which acts as a bankers' bank and with whom all other banks keep an account, simply adjusts in its books the deficit against, or the balance in favour of the member banks after offsetting the different claims of these banks amongst themselves. The member banks, who usually keep certain balances with the Central Bank, pay the difference, if there be any, by a draft on the latter.

Thus the business of settling the inter-bank indebtedness is performed simply by transfer of balances kept at the Central Bank from the account of one bank to the account of another, and securing in the process, a considerable amount of economy in the use of cash.

Such a system of clearing organised and solidified by the Central Bank is no doubt of great advantage to the community. It is, "not only a means of economising cash and capital, but is also a means of testing at any time the degree of liquidity which the community is maintaining—a matter which it is essential for the central bank to know from day to day."<sup>1</sup>

## THE MONEY MARKET

**What is meant by a Money Market?** In a country, the various types of banks and other financial institutions engaged in borrowing and lending money, constitute what is known as the money market. Strictly speaking, the money market refers to the borrowers of money and the lenders of money who are in competition with one another. 'Loans' are obtained in the market and the rate of interest is the 'price' to be paid for such loans. In the money market, the discount houses, the

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<sup>1</sup> *Wallis—Theory and Practice of Central Banking*, p. 248.

accepting houses, and other financiers are the borrowers and the banks are the lenders.

The various financial institutions which constitute the money market may be split up into different parts according as they specialise in different types of loans and each such part may be said to constitute a separate money market. In the first place, there is the Central Bank which provides the necessary stimulus and acts as the guardian of the market. On it rests the responsibility of maintaining the stability and, with this end in view, it expands or contracts the volume of money and credit.

Secondly, there are the call-loan and the short-period loan markets. These markets, as their names suggest, supply loans for very short periods (say, a week) and short periods (say, for three months). In the call-loan market, the borrowers are the bill-brokers and the stock-brokers and the lenders are the commercial banks and other corporations. In the short-period loan market, the commercial banks lend to the government and the industrial and mercantile concerns who want to borrow.

Thirdly, the loans which are for longer periods are supplied by the commercial banks and also there are specialised bodies of promoters and issue houses who undertake to supply new capital. The borrowers of long-period loans are the government, the municipalities, the industrial concerns, etc.

Besides these, there are certain specialised bodies *e. g.*, the Savings Banks, the Land Mortgage Banks, the Co-operative Banks etc., who supply special types of credit.

In the money market the different money rates are, however, not properly co-ordinated. And the discrepancy between these rates, specially between the short-term and the long-term rates gives rise to speculation. The task of the Central Bank is to co-ordinate these different rates.

## **BOOK VII**

### **INTERNATIONAL TRADE AND FOREIGN EXCHANGE**

#### **CHAPTER 32.**

#### **THE THEORY OF INTERNATIONAL TRADE**

**The need and justification for a separate theory of International Trade :** Strictly speaking, from the standpoint of economics, the main factors involved in the inter-regional or international trade, may be said to be an extension and an application of the principles of specialisation and division of labour. Just as productivity of labour can be increased by specialisation and division of labour within a particular industry, similarly, the general productivity of a country or of the countries of the world can be increased by specialised use of land and labour. In other words, international trade, like any other kind of trade, originates in the scarcity and diversity of the productive resources. And it will be advantageous to all if they specialise in the production of those goods in producing which they enjoy the greatest comparative advantages. Indeed all trade originates in specialisation and division of labour and it makes little difference whether the boundaries of the region are those of a district or of a country, for the broad principles involved are the same whatever the frontiers across which the trade flows. Whatever, that is to say, the unit of area, the problems involved are much the same and the principles which can be applied are also much the same. Is there, then, it may be asked, any justification for a separate theory of international trade? The answer is obviously in the affirmative. For, notwithstanding the various similarities between international and domestic trade, there are important differences, too. The countries of the world, it should be remem-

bered, are more than mere geographical areas,—they are areas with their own economic systems which are different from the economic systems of their neighbours who are separated by political frontiers. And this is, sufficient enough to explain why a separate theory of international trade is necessary and why it cannot be a mere application of the theory of localisation of industries. For, this implies, in the first place, immobility of the factors of production. Labour and capital, for instance, move less freely between countries than they do within a country. In spite of the inducement of higher wage, labourers are often reluctant to go elsewhere leaving their own countries. Differences in language, in the ways of living, etc., also present difficulties which obstruct mobility of labour. Similarly, owners of capital prefer to invest at home rather than to take the risk of investing abroad. Mobility of labour and capital is also obstructed when the governments endeavour by legislation to restrict immigration of labour or export of capital. Such immobility of the factors of production often means acceptance of a remuneration by them which is lower than they could get elsewhere. Perhaps labourers could earn a wage or capital could earn a rate of interest, much higher were there perfect mobility, that is, were they not confined, for whatever reasons, within their respective national frontiers. And this immobility of the factors explains why different rates of wage and interest exist in different countries and has a bearing upon the nature of trade which takes place between them and also explains the need for a separate theory of international trade. Secondly, the countries, as we have observed, are more than mere geographical areas; they have their own national governments to pursue different economic policies which they consider beneficial to them. And this may mean imposition of duties or quotas on imports by them leading to complications which would be absent in trades within the frontiers of any country. Moreover, different economic systems of different countries provide different types of facilities for productive activities giving rise thus to differences in the



costs of production. Finally, each country has its own national currency and banking system. This gives rise to the problems of conversion of currencies of the trading countries, settlements of their international payments etc. Within the country, there being no need for conversion, no such problems arise.

A separate theory of international trade is thus necessary for more than one reason. Moreover, we also need a theory which will furnish general principles of national policy as a guide to action.

**Absolute and Comparative Advantages :** Trade between countries thus takes place only when there are differences in the ratios of costs. To illustrate this, let us suppose, firstly, that there are two countries, namely, X and Y, and that each of these countries produces only two commodities, say, tea and tobacco and secondly, let us suppose, that the only factor of production taken into consideration in either country, is labour and thirdly, that the country X is better suited to the production of tea and the country Y is better suited to the production of tobacco and finally, the factor of production, that is, labour, in this case cannot move from X to Y or from Y to X ; only the goods move from one country to the other.

Let us further suppose, that, in the country X :

10 days' labour produce 100 lbs. of tea ;  
and, 10 days' labour produce 50 lbs. of tobacco ;  
and, in the country Y :

10 days' labour produce 50 lbs. of tea ;  
and 10 days' labour produce 100 lbs. of tobacco.

In X, a lb. of tea can be had against  $\frac{1}{2}$  lb. of tobacco, whereas in Y, a lb. of tea can buy 2 lbs. of tobacco. Since, the country X has absolute advantages in producing tea and Y has absolute advantages in producing tobacco, there exist absolute differences in the costs, that is, the cost of producing tea in X is absolutely lower than that in Y and

the cost of producing tobacco in Y is absolutely lower than that in X. It will, therefore, be to their mutual advantage if X concentrates on the production of tea and exchanges it for tobacco; and Y concentrates on the production of tobacco and exchanges it for tea. Both the countries, thus, will gain from the exchange and the ratio at which the exchange will take place will depend on the strength of their demand for these commodities.

Such geographical division of labour thus leads to an increase in the total output of both tea and tobacco and by exchange, the countries X and Y gain when X concentrates on the production of tea only, and Y concentrates on the production of tobacco only, because, X enjoys an absolute advantage over Y in the production of tea, and Y enjoys an absolute advantage over X in the production of tobacco.

Nevertheless, trade between countries may take place even when they do not enjoy such absolute advantages in the production of any commodity. Take, again, for example :

In the country X :

10 days' labour produce 80 lbs. of tea ;

and 10 days' labour produce 80 lbs. of tobacco ;

and in the country Y :

10 days' labour produce 40 lbs. of tea ;

and 10 days' labour produce 60 lbs. of tobacco.

In X the ratio of costs of tea and tobacco is 1 : 1 since 1 lb. of tea can be had in exchange of 1 lb. of tobacco, whereas in Y, it is 1 :  $1\frac{1}{2}$ , that is, 1 lb. of tea can be exchanged for  $1\frac{1}{2}$  lb. of tobacco. Neither country enjoys an absolute advantage in producing any of the commodities as in the previous case. Although the efficiency of labour in X is greater in the production of both tea and tobacco than the efficiency of labour in Y, it enjoys a comparatively greater advantage in producing tea than in producing tobacco. Nevertheless, there is still scope for trade to their mutual advantage. For, since their ratios of costs differ the country X will gain so long as it can obtain more than 1

lb. of tobacco in exchange of 1 lb. of tea. Similarly, Y will gain so long as it can obtain more than 1 lb. of tea by sending less than  $1\frac{1}{2}$  lb. of tobacco. Hence, it will be to their mutual advantage if X concentrates on the production of tea and Y concentrates on the production of tobacco and by exchange, that is, by trade between them if X obtains tobacco and Y obtains tea.

Trade, thus, will take place even when no absolute advantage is enjoyed by any country. Trade is possible and also profitable so long as there exist differences in the comparative ratios of costs of production.

When, however, there exist neither absolute differences nor comparative differences in ratios of costs, that is, when the ratios of costs are the same in the two countries, no trade is possible. Take, for example :

In the country X :

10 days' labour produce 80 lbs. of tea ;

and 10 days' labour produce 80 lbs. of tobacco ;

and in the country Y :

10 days' labour produce 50 lbs. of tea ;

and 10 days' labour produce 50 lbs. of tobacco.

Obviously, X is absolutely superior to Y in producing both tea and tobacco. But the ratio of costs of producing the two commodities, tea and tobacco, is the same in both the countries, viz., 1 : 1, i.e., in each country, 1 lb. of tea (or tobacco) can be exchanged for 1 lb. of tobacco (or tea). Hence, no profitable trade is possible in such circumstances, that is, when the ratios of costs of producing the two products are the same.

It should, however, be borne in mind that the fact that in reality there are more than two countries and they trade in more than two commodities, does not introduce any change or important modifications in the arguments or the principles involved.

This is, in brief, how the classical doctrine of comparative costs developed by Ricardo and others, explained why international trade takes place, or, in other words, why some countries

export certain goods, while others import certain goods. The fundamental idea underlying the classical theory is that the countries should produce only those goods for the production of which they are specially suited on account of their natural or acquired advantages and produce in excess than what they actually require for their own consumption and exchange the excess with other countries against goods which either they cannot produce at all or have to produce at a comparative disadvantage.

**Criticism :** The theory, it is pointed out, errs in that it takes into account the factor 'labour' alone and asserts that goods are exchanged against one another according to the relative amounts of labour which are embodied in them. But nothing is produced by labour alone ; there are other cost-items, too. For instance, there is the sacrifice of "*waiting*." Calculation in terms of '*real costs*' cannot take into account even the disutility of different kinds of labour and hence no correct calculation of a unit of real cost is possible. The theory is thus unrealistic. Moreover, labour is an extremely heterogeneous factor and there exist what are called the non-competing groups. It is, therefore, impossible to compare the effectiveness of labour in the production of the two commodities in the two countries. Prof. Taussig,, however, is of opinion that everywhere in the industrially advanced countries of the West, the structure of non-competing groups is uniform and hence, the mere existence of these non-competing groups does not invalidate the classical doctrine of comparative costs. "But in fact", he observes, "the phenomena of social stratifications are not widely divergent. Non-competing groups on the whole are arranged in the same series of grades in different countries." <sup>1</sup>

Secondly, it is pointed out that the theory ignores the influence of demand on the nature and volume of trade. The volume of trade between two countries depends on the relative elasticities of demand of the two countries for the

<sup>1</sup> Taussig—Principles of Economics, Vol. II.

goods of the other which, we know, also determine the actual terms of trade.

Thirdly, the implication of the assumption of constant cost, made in the doctrine of comparative costs, is that there is no limit to the expansion of international trade. In other words, the countries X and Y could, as it were, concentrate on production of tea and tobacco and expand their output without any limit for the purpose of profitable exchange. But, we know, this is absurd. For, as X will produce more and more tea and Y will concentrate on the production of more and more tobacco, the marginal cost of producing tea in X as well as the marginal cost of producing tobacco in Y, will gradually increase. And, after a certain stage X will find that further concentration on the production of tea will be unprofitable just as Y will find it unprofitable after a certain stage to concentrate on the production of tobacco. On the other hand, as more and more factors will be withdrawn from the production of tobacco in X and tea in Y, the marginal cost of producing these things, (*i.e.*, tobacco in X, and tea in Y) will fall. Hence, after a stage (*i.e.*, when the law of diminishing return has begun to operate) it will be to the advantage of X and Y, because of the fall in the marginal cost, to produce tobacco and tea instead of concentrating more and more on the production of tea, and tobacco. The assumption of constant cost thus is an unreal assumption for the cost ratios both in X and Y will change and, sooner or later, they will be equal in both the countries. Any more expansion of international trade, after this point is reached, will not be profitable either for X or for Y.

**Gains from International Trade :** International trade, thus, may be viewed as exchange by barter on a very large scale taking place among different countries. And a country may obtain the maximum gain from the trade with other countries by devoting itself to producing only those things which it can produce most cheaply, that is, for the produc-

tion of which nature has given her the greatest advantages, (as for example, very fertile land, superior human capacity, etc.) Now, the comparative costs of producing different commodities are different in different countries because Nature has not equipped each country equally with productive resources and the abundance of factors necessary for producing each commodity does not bear the same relation to the demand for each commodity in different countries. A country in order to have maximum gains from trade, therefore, should expand or contract the production of different commodities until her ratios of costs are the same as those obtaining in other countries, and export the surplus or import the deficiency so generated. Gain from international trade is possible so long as the ratios of costs are different at home and abroad, and, other things being equal, the larger the difference, the greater will be the gain. In other words, a country gains from trade when the ratio of prices obtaining elsewhere is different from that obtaining within the country, for, in such circumstances it will buy those things it considers cheap abroad and sell those things whose prices it considers are higher abroad. The bigger the gap and the greater the importance of the articles affected, the larger will be the gain from such import and export.

The extent of the gain from international trade also depends upon the relative productive efficiency of labour at home and abroad. A country, for instance, gains when the efficiency of foreign labour engaged in producing the goods it imports increases. Similarly, it loses when the productive efficiency of labour engaged in producing the goods it exports increases.

When the size of a country is very small, its demand for foreign product being too small will not affect the world-price of the product, but the price of the product it exports will be determined by the state of world demand. It follows, therefore, that the smaller the size of the country relatively to

that of the rest of the world, the more it is likely to gain by the free inter-change of its product with that of other countries.

The extent of the gain obviously in every case will depend on the *terms of trade*, that is, in other words, the ratio at which one commodity of a country is exchanged for another commodity of another country, (*e.g.* ratio at which tea is exchanged for tobacco, in our illustration).

A country gains from international trade more when the foreigners' demand for its products is inelastic whereas its demand for foreign goods is elastic, that is, when there is a great demand for its product abroad while its demand for the foreign products is very low. The ratio of exchange or the actual terms of trade will be determined by the relative elasticities of demand of the two countries (assuming there are two countries trading) for the goods of the other, that is, in other words, on what is said to be the intensity of reciprocal demand in the trading countries.

Opinions, however, differ regarding the way by which the absolute gains from foreign trade can be measured. As observes Benham, if the whole world were one country, there would be no difficulty in realizing how consumers gain by different goods being produced in different places. But the world is divided into so many countries and hence arises the problem of measuring the absolute gains from foreign trade. According to Marshall, the amount of consumer's surplus enjoyed by a country through its foreign trade is a measure of its gain from such trade. But, as some hold, *e.g.* Prof. Ohlin and others, it is doubtful whether the gains from foreign trade can at all be measured with any amount of accuracy. Nevertheless, the level of money incomes may be said to be an indication as well as the source through which the gains from foreign trade are shared among the countries and as observes Tausig, the major part of the gains from foreign trade accrues to those countries whose levels of money incomes are high.

When foreign demand for a country's products is great, its export industries thrive and wages in those industries, therefore, rise. This rise in wages will also force up the level of wages of workers in other industries (or else, they will leave those industries to join these export industries). Hence, in the country the level of money wages will be high. But the prices of internationally traded goods tend to be same everywhere and hence, the people of the country where the level of money incomes is high gain as consumers of these internationally traded goods more than the people of those countries where the levels of money wages are low.

Finally, any reduction in the cost of transport or in the difficulty of selling in the foreign markets, as observes Harrod, enlarges the possible sphere of gainful foreign trade.

**Free Trade versus Protection :** The mercantilists believed that money was the best form of wealth and the only object of foreign trade was to import precious metals from foreign countries by more and more export. The more was the volume of export of a country, the more favourable would be its balance of trade and hence, more precious metals would be coming into the country and make it wealthier. Hence, exports were encouraged by them and imports (excepting, of course, of gold) were discouraged. As opposed to these beliefs of the mercantilists, the classical economists put forth the case for free trade. It opposed, that is to say, the policy of obstructing international trade by any method, *i.e.* either by protective tariffs or by any other method. Although the controversy is an old one still it has some bearing on the trade policies of the countries of the world even to-day. To understand this we should examine in some details the case for free trade as well as the case for protection.

**The Case for Free Trade :** A country is said to have a policy of free trade when it does not impose any restriction.



upon its international trade with a view to protecting its domestic industries from foreign competition.<sup>1</sup>

The main arguments of those who defend free trade may be summed up as follows :

Capital and labour, it is said, will flow in every country, when there is no artificial obstruction in the shape of tariffs, quotas, etc., to those industries for the development of which it enjoys the greatest natural advantages. Every country thus will concentrate only on those industries for which nature has given it the greatest advantages. Free trade will ensure the most desirable allocation of resources throughout the world and thus will maximise the income and the output of every nation and, therefore, of the world as a whole.

Secondly, unrestricted international competition, it is said, will eliminate, on the one hand, the inefficient producers every where and benefit the consumers since they will buy the commodities at the lowest possible prices and, therefore, will enjoy the maximum possible consumer's surplus, and, on the other, such healthy competition will also not allow the growth of monopolies.

"Whatever may be said for protection in theory," observes Benham, "free trade seems best in practice, and there is always the general case for free trade, which few people without economic training really understand : namely, that it promotes international specialization and thereby enables the productive resources of a country to be put to their most advantageous uses."<sup>2</sup> It is, however, admitted that the case for protection 'as an emergency measure' deserves special consideration.

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<sup>1</sup> Sometimes such a country may impose taxes upon foreign imports for obtaining 'revenue' but not for giving protection to domestic industries. Such taxes as may be imposed upon foreign commodities for revenue purposes are collectively said to form a "*revenue tariff*" as opposed to a "*protective tariff*" whose purpose is to give protection to domestic industries against foreign competition, and encourage domestic industries.

<sup>2</sup> Benham—Economics (4th Edn., 1949), p. 489-90.

**The Case for Protection :** The policy of protection implies a policy of deliberate regulation of foreign trade by the government of a country with a view to weakening foreign competition with domestic industries and stimulating their growth and development by such regulation, (i.e., by giving them protection against such foreign competition). The most usual devices which are adopted for giving protection to home industries against foreign competition, are : (i) imposition of duties on foreign goods which are imported ; (ii) fixing of quotas with a view to restrict the quantity of imports from foreign countries ; and (iii) grant of bounties to the home industries.

The main arguments of those who defend the policy of protection are the following :

(i) *Infant industries argument* : There are, it is argued, always certain initial difficulties in starting new industries although a country may possess great natural advantages for the development of these industries. Hence, these industries require help for a certain period so that they can grow and establish themselves against the existing foreign competitors (who are stronger because of their earlier starts) and become sufficiently mature and strong to dispense with any further aid. The temporary loss to the consumers from protection will be amply compensated by the eventual gains to the country in the shape of the establishment and development of these new industries and increase of productive power, as List argued.

No one denies the theoretical validity of this argument whose strongest upholder was F. List and it is admitted that there is a strong case for protecting such industries by the levy of temporary protective duties. "Nevertheless," as observes Benham, "tariffs for which there is a case on theoretical grounds have seldom worked well in practice. The imposition of duties by one country often leads to retaliation by others. Infant industries practically never grow up but on the contrary demand increased protection. A protective tariff usually gives rise to "log-rolling," pressure on the Government by vested

interests seeking more protection, and, in some countries, a good deal of corruption.”<sup>1</sup>

(ii) *Diversification of industries argument*: Defenders of the policy of protection emphasise the necessity of diversification of industries on the following grounds: In the first place, it is argued that the development of varied forms of industry is necessary for all-round progress of a country. Secondly, it is said that it is often risky to depend upon one single industry or a group of industries. Diversification of industries would eliminate this risk and hence is justified and desirable. Thirdly, diversification of industries will open avenues for employment of people of different grades of skill and lead to the fullest utilisation of the resources of the country.

(iii) *National Self-sufficiency*: On grounds of national self-sufficiency and national safety, the policy of protection is often defended. Certain key industries *e.g.*, Iron and Steel, etc., are not only indispensable for the growth of other industries or the industrial progress of the country in general, but are also absolutely necessary for defence and dependence on others in these matters may often prove to be extremely risky and is certainly unwise as a policy. Hence, due protection should be given to these industries to make the country self-sufficient and strong, even if it does not have natural superiority in the establishment of these industries and buying from others may prove to be less expensive. Similarly, a country may protect agriculture because it is considered desirable to maintain a large agricultural population.

Everybody agrees with the view of Adam Smith that opulence is less important than defence. Nevertheless, these arguments, however convincing they may be, are non-economic. And, as it has been observed, an “economist can only point out the sacrifice, in the form of a standard of living lower than it would otherwise be, entailed by such policies, leaving states-

<sup>1</sup> Bentham—Op. Cit. p. 489.

men or citizens to decide whether the sacrifice is worth making.”<sup>1</sup>

Besides these main arguments, the policy of protection is defended on various other grounds also. For instance, it is argued that for a country with high money wages protection is necessary for maintaining the high standard of living of the people. Otherwise, *i.e.*, in the absence of such protection, the country will be undersold by countries with low money wages.

It should, however, be noted that high or low wages may not necessarily imply high or low cost of production and, therefore, high or low prices as this argument presumes. High wages unaccompanied by high productivity obviously will mean high cost—but when the productivity is also high and labourers produce more, the cost per unit will naturally be low and, therefore, prices also will be low and the country may not be undersold by others. Similarly, low wages may imply high cost and, therefore, high prices when the productivity of labour is also low. There is thus no justification for the apprehension that a country with higher level of money wages will necessarily be undersold by another with low wages. High wages can be maintained when the productivity of labour is also high.

A similar fallacious argument is that wages can be raised by imposition of tariffs, since tariffs will check imports and encourage exports and hence gold will flow into the country. It is, however, overlooked that when gold comes into the country, prices also register a rise simultaneously with the rise in wages and, therefore, the real wages do not rise because of such import of gold. Higher wages, as we have seen, are the results of higher productivity. Hence, imposition of such duties, by preventing labour and capital from flowing to the most profitable industries will affect productivity and, therefore, wages adversely. It is, therefore, fallacious to think that a policy of protection, by raising wages, will improve the standard of living of the people. Besides, by raising the prices of imports, such

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<sup>1</sup> Benham—Op. Cit., p. 488.

a policy will lead to a reduction in consumption and so will mean a reduction in the national real income also.<sup>1</sup>

It is sometimes believed that when protection is given, employment in the protected industries will increase and, therefore, the total money incomes of the people will also increase. These, *i.e.*, increased employment and money incomes of the people, in their turn, will provide a good market for the products of other industries in the country. It is, however, overlooked that restriction of imports resulting from the imposition of protective duties, leads to a decrease in exports, too, and while for the protected industries the home market may expand such a policy surely will mean contraction of the foreign markets for the export industries.

Imposition of protective duties is fair, it is sometimes held, when the object is to equalise the cost of production of home and competing countries, that is, when domestic costs are higher than those of the competing countries, the domestic producers are obviously at a disadvantageous position in the competition with the foreigners and, hence, duties should be imposed on imports to enable the home producers to compete with the foreigners on equal terms. Expansion of the protected home industry, it should be remembered, will depend on the elasticity of home demand for the protected commodity and also on the increase in the costs of the industry while it expands. In spite of protection, if some imports are made, it may necessitate further expansion at higher costs and, therefore, further protection by raising the import duty. An import duty is like an indirect tax and in this case the burden on the consumers will be considerable indeed. Also, this, in practice, may mean protecting the least efficient industries unable to compete with the foreign rivals in fair competition and, therefore, is undesirable. Besides, such endeavours will always be followed by retalia-

<sup>1</sup> It should, however, be noted that the level of wages in different industries may be different because of differences in the productivity of their labour which may be due to various reasons *e.g.*, workers may be more efficient, natural resources may be richer, etc.

tion by others and hence, will put obstruction to smooth international trade.

If, therefore, the mercantilists were wrong in their advocacy for encouraging exports with a view to amass precious metals, the present-day defenders of the policy of protection will err if they endeavour to restrict imports in order to ensure all round progress of the country. For, no country can continue to export for long prohibiting all imports. In the long run, if international trade exists, exports and imports must balance. None however, questions the justifiability of imposition of anti-dumping duties. But protection against dumping of goods by foreigners should be only for a temporary period. Economic nationalism will not be beneficial for any country in the long run.

**Protection and Unemployment :** Does protection really provide a cure for unemployment as its defenders often seem to suggest? To the extent such protection leads to expansion of domestic industries, obviously it affords more employment in those industries. But the shrinkage which such a policy will automatically entail in the export industries will necessarily result in unemployment in those industries. Protection, adopted as a policy, therefore, cannot bring about any net increase in the volume of employment. For, in the long run exports and imports must balance and hence, if tariffs restrict imports, eventually they will lead to a decline in the volume of exports too. When, therefore, employment may increase in the protected domestic industries there will be a corresponding decrease in employment in the export industries of the country.

According to Keynes, however, there are at least two ways in which imposition of tariffs may result in increasing the net volume of employment provided, of course, the volume of exports can be maintained at the old level, *viz.*, *Firstly*, the country taking recourse to tariffs with a view to restrict its imports, may also adopt a policy of increasing its foreign lending. Such a policy will, on the one hand, succeed in restricting the imports and therefore in increasing employment in the protected domestic industries which will expand and on the

other, will be able to maintain the volume of export and, therefore, of employment in the export industries, at the old level. There will thus be a net increase in employment since increased employment in the expanding domestic industries will not be offset by a fall in employment in the export industries.

Such a policy, though may enable to maintain exports at the old level and hence does not lead to a fall in the employment in the export industries has, however, serious limitations. In the first place, it means increasing employment by diverting domestic capital to foreign lands and may result in a decline in the supply of domestic capital and also in investments at home. Besides, exporting capital can never be adopted as a permanent policy for increasing the volume of employment. Finally, it should be noted that tariffs not only restrict the imports of the country imposing them but at the same time curtail the ability of the foreigners to sell their goods and hence, have adverse effects on their economic conditions. It may not, therefore, be always a wise policy to advance more loans to such countries. *Secondly*, by giving bounties to the export industries from the proceeds of the import duties, it is suggested, exports can be maintained at the old level. But a general export bounty as a policy can never achieve the desired result, since others will take recourse to the imposition of anti-dumping duties and hence, the policy will fail to serve its purpose *viz.*, increasing the net volume of employment. Protection, as a policy, therefore, does not provide a cure for unemployment. Unemployment is a malady far more serious and there may be several causes at the root *e.g.*, cyclical fluctuations in trade and industry, adoption of inventions, etc., which surely cannot be removed by tariffs.

### OTHER FORMS OF PROTECTION

**Import Quotas :** Fixation of import quotas is also a device for restricting the imports from foreign countries, for, an import quota prescribes the maximum amount, and not the va-

lue, of the commodity which may be imported during a given period.

A quota is said to be *global* which restricts the total amount to be imported of a given commodity, *i.e.*, the commodity may be imported from any country upto the limit fixed by the quota. Such a system often necessitates refusal to senders of goods when the quota is filled and not infrequently countries from which a little has been imported complain of unfair treatment. A better device thus is to divide the quota among the supplying countries. The government or a Chamber of Commerce, on its behalf, often issues import licences among the different importers of the country and thus distributes the total quantity imported among them.

Often, again, the government permits the entry of a particular commodity at a low rate of duty but only upto a specified quantity. There is, however, no restriction to the entry of any additional amount, that is, above the specified quantity, at a higher rate of duty. Such a device is known as a *Tariff Quota*.

An import quota, again, may be *Unilateral*, *bilateral* or *mixing*. It is *unilateral* when an absolute limit is imposed by the government of a country on the importation of a commodity during any one period without any prior negotiation with the foreign governments. It is said to be *bilateral* when the import quota is determined after negotiations between different governments. *Mixing quota* may be said to be an arrangement which regulates or limits the proportion of foreign-produced raw material that could be incorporated in the climatically finished goods (*e.g.*, The British wheat regulations specifying the proportion of foreign wheat which may be mixed up with British wheat).

Quotas, it is said, have certain advantages over duties. For instance, they can be easily altered and hence are more flexible than duties. They are helpful to the home producers in that they know the quantity of imports to come in. The govern-



ment also encounters less protest from the consumers when it fixes quotas than when it imposes duties.

Nevertheless, the distribution of the quotas has to be arbitrary and since such a system necessarily gives more power to the officials, there is scope for corruption. Moreover, the government loses revenue when it, instead of imposing import duties, decides to restrict imports by quotas. Finally, an import quota cuts off a country from the rest of the world market in that commodity. When, for instance, the costs of production in the exporting countries fall, the imports, under a stable import duty, increase and the price in the home country falls. But, under a quota, since the amount to be imported is fixed, this cannot happen.

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## CHAPTER 33

### FOREIGN EXCHANGE

**The Problem of International Payments : The Rate of Exchange :** So long as a trader sells his goods within his own country and receives payments no difficulty arises. For, within the national boundaries there exists one uniform monetary system and in exchange for the goods he sells he gets money acceptable as legal tender within the country. But the moment his goods cross the national boundaries, that is, the moment he exports to another country, the position becomes different. For, there is no unit of account common to all, that is, there does not exist anything which may be called international money, which can buy goods and services throughout the world and is acceptable in settlements of debts internationally. The importer to whom the foreign trader has sold his goods, has to convert the currency of his own country into the currency of the exporting country in order to pay for the goods he has bought. International payments, therefore, are different from domestic payments in that they necessitate exchange of one kind of money for another. Payments to a person living in a foreign country and receipts from a person living in a foreign country, involve two problems, *viz.*, firstly, the transfer of a means of payment from one place to another and, secondly, there is the problem of conversion, that is, conversion of the means of payment from the currency of one country into the currency of another country.<sup>1</sup> In other words, every payment

<sup>1</sup> The most expedient instrument for making such payments is the bill of exchange. The operation of a bill of exchange may be illustrated in the following way : Let us suppose, that A and B live in India and C and D live in England. Let us suppose, further, that A has imported goods worth £5,000 from C; and B has exported goods of the same value (*i.e.* £5,000) to D. Now, in the absence of the use of a bill of exchange, shipments of gold would be necessary for making payments for the goods bought by A and D from C and B respectively. But, the use of a bill of exchange renders such shipments of gold, which entail considerable expenditures, unnecessary

which has to be made (and by foreign exchange is generally understood the foreign money, as seen by the domestic buyer or seller) by one country to another necessitates an exchange of its domestic currency for the currency of the country to whom the payment has to be made. This necessity of exchanging one currency for another raises the problem of fixing the rate of exchange, that is, the ratio at which the domestic currency of a country can be exchanged for the currency of any other country (i.e., for any foreign currency). The rate of exchange between two currencies, in other words, measures the number of units of one currency which exchange, in the foreign exchange market, for one unit of another currency.

"The rate of exchange, is the price of one currency in terms of another or, in other words, the number of units of one currency which exchange for a given number of units of another currency. The price or rate of exchange of one currency in terms of others cannot be fixed but varies continuously with variations in the existing relation between the world demand for and the supply of that currency." <sup>1</sup> And the problem of determination of this rate of exchange is the problem of foreign exchange which has been defined as that "section of economic science which deals with the means and methods by which rights to wealth expressed in one country's currency are converted into rights to wealth in terms of another country's currency. It involves the investigation of the method by which

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in the following way: C who has sold goods to A draws a bill on A for £5,000, who accepts the same i.e., agrees to pay the sum on a specified date. C, now sells the bill to D, living in the same country and thus receives payment in his home currency. D, who has to make payment to B, sends the bill to him i.e., B, and asks him to collect the money from A, living in his own country. B will present the bill to A and receive payment on due date in his home currency.

Now-a-days, however, the importance of bill of exchange has considerably declined and payments are made by *banker's drafts*, i.e., an importer buys a *draft* from a bank and sends it to the exporter who receives payment by presenting the *draft* to the foreign branch of the bank or to its agent.

<sup>1</sup> Evitt—A Manual of Foreign Exchange.

the currency of one country is exchanged for that of another, the causes which render such exchanges necessary, the forms which exchanges may take, and the ratios or equivalent values at which such exchanges are effected.”<sup>1</sup>

**Balance of Payments :** The balance of trade is a list of the values of tangible goods (*i.e.*, visible and can be weighed and counted) which a country imports and exports and is the most important item in the Balance of Payments—which includes all the in-and-out payments between one country and the rest of the world.

Now, except by an accident the balance of trade of a country does not balance. For, either a country exports more than it imports or, it imports more than it exports. When there is a net excess of exports over the imports, the balance is said to be favourable, or, active, and when there is a net excess of imports over exports, the balance is said to be adverse or unfavourable, or, passive. But a country's balance of payments exactly balances. It is, therefore, necessary to bear in mind the distinction between the balance of payments and the balance of trade, which, as we have observed, is one important item in a country's balance of payments.

The items to be included in a complete Balance of Payments may be divided as follows :

A. The Balance of Visible Trade, that is, the values of the tangible goods which a country imports and exports.

B. Just as a country makes or receives payments when it buys or sells goods, so payments or receipts are always being made between countries for buying and selling services too, though, the visible Balance of Trade takes no account of these services and, therefore, of payments or receipts on their accounts. These invisible items, therefore, should also be included in the Balance of Payments. These include pay-

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<sup>1</sup> Ibid.

ments which are made on account of say, shipping freights, insurance premiums, tourists' expenses and also gifts and charities made by the nationals of one country to the nationals of any other country, etc. Personal remittances and also such payments as War Indemnities, Reparations should also be included in the Balance of Payments.

C. Thirdly, the Balance of Payments includes every payment or receipt in respect of interest, dividend etc. It includes, it should be noted, every payment made by, or to, private citizens as well as governments.

D. A complete Balance of Payments should also include, besides these items, the *capital account*, which may be divided into short-term (which includes all the changes in gold and foreign bank balances and other short-term credits and debits) and long-term capital accounts (which includes, such transfers of funds which give rise to long-term capital claims). Long-term capital account, in other words, denotes the amount of funds tied up in foreign investments for a considerable period of time.<sup>1</sup>

The items included in A, B, and C, that is, the visible and invisible items of the balance of trade and receipts and payments of interest etc., constitute what is said to be the *income account* of the Balance of Payments and the items included in D constitute what is called the *capital account*. And a complete Balance of Payments should include all these in-and-out payments between one country and the rest of the world.

The capital account is the counterpart to the income account and since the balance of payments balances exactly, the

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<sup>1</sup> It is customary to divide the Balance of Payments into two sections, viz., the current balance and the capital balance, the accounts of gold coin and bullion being taken separately. The composition of capital account, however, is a difficult matter. And the "ideal solution would be to have three items representing the hoarding of cash; direct International Investment in Colonies, or in enterprises carried on abroad but owned at home; and finally, loans to other countries."—(Crowther—An Outline of Money, p. 348).

net total of the capital account must be equal and opposite to the net total of the income account.<sup>1</sup>

**How does a Balance of Payments Balance ?** Every transaction or exchange, we know, has two sides : an amount of foreign currency bought by some body means that an equal amount has been sold by some body else. More plainly, over any period of time, the total amount of rupees sold on foreign exchange market is equal to the total amount of rupees bought. In other words, if rupees are exchanged for some foreign currency, then in the same transaction some foreign currency is exchanged for rupees. If, therefore, two lists are made *viz.*, one including all elements entering into the total sales of rupees in the foreign exchange market and the other including all items contributing to the purchases of rupees in the foreign exchange market,—the total in either case must be the same amount of rupees. To state, therefore, that the balance of payments always balances is no more than to state the truism that the amount of foreign exchange sold must be equal to the amount bought or, in other words, because of the double-entry book-

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<sup>1</sup> The main credit and debit items in the current account of a country's balance of payments are the following :

*The credit items, i.e.,* international transactions giving rise to money claims of the citizens of a country on the citizens of other countries : (i) Value of visible exports (ii) Payments made by foreigners for shipping services rendered by it. (iii) Remittances by its nationals living abroad. (iv) Expenditures of foreign tourists within it. (v) Interest and dividends accruing to its citizens from foreign countries. (vi) Institutional contributions received by it from foreign countries. (vii) Payments by foreign governments to its government.

*The main debit items, i.e.,* all international transactions giving rise to money claims of other countries' citizens on its citizens : (i) Value of visible imports ; (ii) Payments made by its citizens for shipping services rendered by foreign countries ; (iii) Remittances by immigrants to their home countries ; (iv) Travel expenditures of its citizens touring abroad ; (v) Interest and dividend payments made by it to foreign countries ; (vi) Institutional contributions made by it to foreign countries ; (vii) Payments made by its government to foreign governments.

Since the total credits and the total debits must balance, any disequilibrium in the current account of the balance of payments should necessarily be offset by opposite movement on capital accounts.

keeping procedure, the debit items in a country's international accounts must be equal to the credit items.

**Exports Pay for Imports :** We have seen that the total debits and credits of a country in the long run are equal in the sense that the goods, moneys and services, rendered by one country to other countries plus its credits and claims of all kinds, will be exactly balanced by the goods, moneys and services received by it plus its obligations and debts of all kinds.

The statement that exports pay for imports is similarly true in the sense that if a country imports goods and services of a certain value from other countries, then it must, in the long run, export goods and services of an equal value in payment for its imports.

When, therefore, it is stated that exports pay for imports, it is not merely implied that at any given time the value of things imported should exactly correspond to the value of the things exported. For, international exchanges often take place on the basis of credit and payments in international transactions, therefore, are often postponed but eventually when such postponed payments will be made, the gap, if there be any, will be bridged over. That is, in the long run the country's total credits (exports of commodities and other credits) must equal its total debits (that is, imports of commodities and other debts). For, in the long run, every country must pay its debts (countries utilise their total credits to pay their total debts). In the long run, therefore, a country's total credits from all the countries of the world must be equal to its total debts to all countries.

It may be of interest to note that for any country, it is impossible to have a continuous favourable balance of trade (i.e. excess of exports over its imports), and to receive the difference in value between exports and imports in gold, unless, of course, we assume that it is trading with a gold producing country.

Even if we assume that it is trading with such a gold-producing country, its exports can continue to exceed its imports

in the long run only by the value of the annual gold production of the country which is exporting gold.

When, however, the country is trading with others, *i.e.*, non-gold producing countries, its exports to them can exceed its imports from them, only until their gold stocks are exhausted.

When, however, both the countries (*i.e.*, the excess-exporting and the excess-importing country) are on gold standard, the balance of trade would reverse itself long before the gold stock of the excess importing country is exhausted. This is obvious, because, gold will come into the excess exporting country and lead to an expansion of its currency and hence, to a rise in its prices. On the other hand, the prices of the country which is losing gold will fall since the withdrawal of gold will result in a contraction of its currency. It is, we know, always profitable to sell in the country in which the prices are high and to buy from the country in which the prices are low. Therefore, the country which was having a favourable balance of trade, can no longer export more since its prices have risen; its exports decline and imports increase, whereas the exports of the other country which has lost gold increase since the prices have fallen. Eventually, therefore, a country's exports become equal to its imports.<sup>1</sup>

### DETERMINATION OF THE RATE OF EXCHANGE : DIFFERENT THEORIES

**Balance of Payments Theory :** We have seen that the total in-and-out payments of each country will have to balance and the function of fluctuations in the foreign exchange rates is to bring about this equilibrium.

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<sup>1</sup> Attempts may, however, be made to maintain the excess of exports by advancing loans to the importing countries. But the interest and the principal of such loans must be repaid in goods and services. Payments cannot be made in gold, for, the available supply of gold is too small and, therefore, as observes Crowther, if "the creditor country refuses to accept payment by goods and services, the only alternative for the debtor is default."



The rate of foreign exchange is the price which has to be paid in terms of national currency in exchange of a unit of foreign currency. And just as the price of any commodity is determined by the relative strength of the demand for and the supply of it, similarly, the price of a currency, that is, the rate of exchange is also determined by the relative strength of the demand for and the supply of that currency in the foreign exchange market<sup>1</sup> where foreign exchange is bought and sold. And just as the function of the price is to bring about an equilibrium between the demand for and the supply of a commodity, similarly, it is the function of the rate of exchange to bring about an equilibrium between the demand for and the supply of a foreign currency.

The rate of exchange or the price of a currency is thus determined by the relative strength of demand for and the supply of that currency in the foreign exchange market. When, for instance, we speak of the relative strength of the demand for, and the supply of, rupees in exchange for dollars, what we mean is the relation of the number of dollars that are being offered for exchange into rupees to the number of dollars that are being demanded in exchange for rupees.

Again, just as in the case of any other thing, the demand increases or decreases as the price falls or rises, similarly, the demand for dollar will increase or decrease with the fall or rise in the price of the dollar in terms of rupees. Thus a fall in the price of dollar in terms of rupees will lead to an increase in the demand for dollar. Similarly, a fall in the price of rupees in terms of dollar will lead to an increase in the supply of dollar. For, it will be profitable for Americans to buy rupees when it becomes cheaper in terms of dollar (*i.e.* the price of dollar in terms of rupees has risen).

While studying the theory of value we have seen that it is the function of the price of a commodity to equate its supply

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<sup>1</sup> "The foreign exchange market is primarily the mechanism by which exchanges of national currencies are carried through." Crowther—*An Outline of Money*, p. 908.

with its demand, that is, to bring about a position of equilibrium and the price which brings about this equilibrium is known as the equilibrium price. Similarly, since the rate of exchange is the price of a currency, its function also is to bring about this equilibrium, that is, to equate the supply of a foreign currency with its demand and the rate of exchange which equates the demand for and the supply of a foreign currency, that is, which brings about an equilibrium, is the equilibrium rate of exchange.

Now the actual rate of exchange or the price of a foreign currency in terms of domestic currency is determined by forces of demand and supply on the foreign exchange market. These forces, according to the Balance of Payments theory, in their turn, are determined by various items in the Balance of international payments. That is, in the case of an unfavourable balance (a country's imports are more than its exports) since the demand for foreign currency will increase, the rate of exchange will fall. Conversely, in the case of a favourable balance (its exports more than its imports) the rate of exchange rises, for foreigners' demand for the excess exporting country's currency increases while its demand for foreign currency falls.

The Balance of Payments theory is correct in its emphasis that the rate of exchange is affected by the current supply of and demand for foreign exchange, or, in other words, the immediate influence which determines the rate of exchange is the balance of a country's international indebtedness. Nevertheless, it is equally true that the items of the balance of payments are neither pre-determined nor are fixed quantities, rather, they are themselves dependent on the rates of exchange. The Balance of Payments theory does not explain the causes which determine the balance of trade and, therefore, the Balance of Payments. The theory, thus fails to explain the real causes which determine the rates of exchange.

**The Purchasing Power Parity Theory :** During and after the First Great World War (1914-18) the issue of ex-

cessive inconvertible paper money resulted in severe inflation in several European countries. Earlier, that is, upto 1914, since most of the countries were on gold standard, the fluctuations in the rates of exchanges were restricted within the gold points. But now that the gold standard has been abandoned by the countries, the exchange fluctuations cannot be explained with reference to mint parity. The question, therefore, is how are the rates of exchange between the currencies of the different countries to be determined when they are not on gold standard? The rates of exchange, according to the Purchasing Power Parity Theory, should normally reflect the relation between the internal purchasing powers of the various national currency units. In the words of Prof. Cassel, our "willingness to pay a certain price for a foreign money must ultimately and essentially depend on fact that this money has a purchasing power as against commodities and services in the foreign country. On the other hand, when we offer so much and so much of our own money, we offer, in fact, a purchasing power against commodities and services in our own country. Our valuation of a foreign money will, therefore, essentially depend on the relative purchasing power of the currencies of both countries." The movements, that is to say, in the external value of a currency (measured by the ratio at which it exchanges for other currencies) tend to follow movements in its internal value (measured by the prices) "*relative to the internal value of other currencies.*" In other words, the ratio of exchange between two currencies tends to be the same as the ratio between the purchasing powers of these currencies.

The rates of exchange when there are independent systems of inconvertible paper in different countries, according to the Purchasing Power Theory of Cassel, are not determined by the balance of trade. The par rate of exchange between the currencies of two countries, under these conditions, is determined by the relative price-levels in the two countries. The rate of exchange between two currencies tends to be such that the same amount of purchasing power, when exchanged at that rate,

should buy the same amount of goods and services in both the countries. More plainly, if for instance, X amount of goods and services can be bought by spending £1 in England, and by spending, say, \$5 in U.S.A., then the rate of exchange between England and America will be  $£1 = \$5$ , that is, this will be the purchasing power par of the two currencies. This par, however, it should be remembered, is not a fixed par; it is a moving par and it varies with every change in the price-levels of the two countries. It is the norm to which the exchange rate has a tendency to adjust after each deviation which may result from unfavourable balance of payments.

Since this par is a moving par (moving, as we have said, with changes in the price-levels of the countries), it follows that there can be a lasting equilibrium rate only when it is assumed that the conditions in the two countries are the same, but in no two countries the conditions remain the same over a period of time. The equilibrium point, therefore, must be different in different sets of conditions. How, then, are we to determine the purchasing power parity which necessarily changes its position with the changes in the value of a currency?

If the conditions in the two countries under consideration change, (assuming that we have started from the position of equilibrium) the equilibrium position also will change and the change in the equilibrium rate would be proportionate to the change in the ratio of prices in the two countries. The equilibrium rate, that is to say, is to be "multiplied by the quotient of the degree of inflation or deflation." When the currencies of two countries have been inflated, the new normal rate of exchange will be "equal to the old (mint parity) rate multiplied by the quotient between the degrees of inflation of both countries. There will, of course, always be fluctuations from this new normal rate, and in a period of transition these fluctuations are rather apt to be wide. But the rate calculated in the way indicated must be regarded as the 'new parity' between the currencies. This parity may be called the purchas-

ing power parity, as it is determined by the quotient of the purchasing powers of the different currencies.”<sup>1</sup>

Let us take an illustration. Let us suppose that the rate of exchange between U.K. and U.S.A., in the base year, say, 1939, that is, the year in which the relationship between different price-levels and the rates of exchange are assumed to be normal, is £1 : \$ 4. Ten years after, that is, in the year 1950 the positions have altered and suppose that the index numbers in 1950 indicate that the price-levels in U.K. and U.S.A. have risen to 320 and 240 respectively. Hence, the new equilibrium rate will be  $\text{£} = \$ \frac{4 \times 240}{320} = \$ 3$ .

**Limitations of the Theory :** Cassel's Purchasing Power Parity Theory, it is said, holds good only under very simplified conditions. In reality the conditions are, however, not so simple and various factors have to be taken into consideration and hence, the theory, for practical purposes suffers from various limitations. For instance, in the first place, the index numbers by using which we can measure the price-levels in different countries are compiled in different ways in different countries and, therefore, are not very accurate and sure guides. Besides, the selection of the base year presents some difficulties. The proposal to adjust the exchange rates to changes in price-levels on the basis of index numbers, therefore, is faulty. Secondly, the theory assumes that the rise in the prices in the countries concerned has affected all commodities in a similar way which obviously is an unreal assumption. We cannot assume unchanged price relationships within all countries. It should be noted that the goods which are domestically traded do not have any direct bearing on the exchange value of the currency and hence their prices may fluctuate without directly affecting the exchange rate. Only the goods which are internationally traded influence the demand for and the

<sup>1</sup> Cassel—Money and Foreign exchange after 1914, p. 140.

supply of foreign currency and, therefore, the exchange rates. But it is obvious that the domestic prices of 'internationally traded goods tend to be equal in different markets (allowances being made for transport costs, tariffs and other delivery expenses) when translated into each other at the current exchange rates. The theory, therefore, is no more than a truism when restricted only to goods which are internationally traded.<sup>1</sup>

Thirdly, the theory would be even less satisfactory if only the prices of domestically traded goods are taken into consideration for purchasing power parity calculations. For, in that case, it has to be assumed that in the long run the domestic prices of goods and services which do not enter into international trade move more or less in the same proportions as the prices of the goods and services which do enter into international trade move. But even in the long run, the percentage change of prices of domestic and internationally traded goods is not likely to be the same. And it is a mistake to assume that the fluctuations of exchange rates and internal purchasing powers should be proportionate. It is, however, likely, that international price changes will influence the internal purchasing power of a country's currency more if international trade constitutes an important part of its trade and hence in this case, domestic prices and international prices will have a greater tendency to move together than they will have, when international trade constitutes only a negligible part of the country's trade. In other words, fluctuations in the exchange rates will affect the price-levels of different countries in different ways according to the varying importance of the foreign trade of those countries.

Fourthly, the rate of exchange between two countries is also affected by an increase or a decrease in the demand of

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<sup>1</sup> Again, which goods are internationally traded depends on the exchange rates, since "a rise in the price of foreign currencies would make a hitherto domestic commodity exportable and would remove hitherto imported articles from the list of internationally traded ones." (Hahn—Op. Cit. p. 224).

one country for the product of the other country, although, the price-levels may remain the same. The Purchasing Power Parity theory, which uses the price movements as the main criterion ignores the importance of other factors which may affect the volume of demand and "treats demand simply as a function of price, leaving out of account the wide shifts in aggregate income and expenditure which occur in the business cycle (as a result of market forces or government policies) and which lead to wide fluctuations in the volume and hence the value of foreign trade even if prices or price relationships remain the same."<sup>1</sup>

The balance of payments is affected not only by relative price changes but there are also other factors which affect the balance of payments. For instance, changes in incomes, capital movements (*e.g.*, for giving loans or for repayment of foreign debts, etc.) changes in the international demand and costs, etc., which, though not appreciably affected by price changes, yet do affect the balance of payments and hence, the rates of exchange. The Purchasing Power Parity theory ignores the importance of these factors and hence the practical usefulness of the theory is questioned. The balance of payments and, therefore, the rate of exchange will be affected by changes in the barter terms of trade, say, due to changes in efficiency or in reciprocal demand, changes in the conditions of supply of exported goods, changes in the volume of foreign loans, etc., although there may not be any change in the relative price-levels. The Purchasing Power Parity theory is defective in that it does not allow for such changes in the barter terms of trade.

It is true that there are various limitations of the Purchasing Power Parity Theory of Cassel. Nevertheless, it is to be admitted that the theory seeks to explain the manner in which the rates of exchange are determined in the long run. The theory also explains how the balance of indebtedness is itself

<sup>1</sup> Ragnar Nurkse—*International Currency Experience*, p. 126.

determined by the reaction of prevailing prices in different countries on the rates of exchange and also on international movements of goods.

**Fluctuations in Rates of Exchange : Causes :** There are various factors which lead to the fluctuations in the rates of exchange. In brief, they may be grouped as follows :

I. *Trade Operations* : When a country exports more than it imports, the rate of exchange moves in its favour. Conversely, when it imports more than it exports and, therefore, its demand for foreign currency increases, the rate of exchange moves against it, that is, the rate falls. The volume of exports and imports, therefore, determines the demand for and supply of foreign currency and, therefore, influences the rate of exchange. We should, however, include in the volume of exports and imports, not only goods but also such invisible items as freights, insurance premiums, tourists' disbursements, etc.

II. *Stock Exchange Transactions* : The Stock Exchange Operations also influence the rate of exchange. These transactions include payment of loans, interest on loans, payment of dividends, repayment of loans, purchase and sale of foreign securities by investors at home or home securities by investors abroad, etc. These transactions obviously affect the rate of exchange. When, for instance, a country grants loans to another, its demand for foreign currency increases, and, therefore, the rate of exchange falls, that is, the rate of exchange moves against the lending country. At the time of repayment of the loan, however, the rate of exchange will be favourable to it. Similarly, when we buy foreign securities, the rate of exchange falls and when foreigners buy domestic securities, the rate of exchange of our currency rises.

III. *Banking Operations* : Banking transactions, e.g., investment by bankers of funds in foreign countries, issue of travellers' letters of credit by the banks, the undertaking of 'arbitrage operations' by them (i.e. buying and selling of



foreign currencies in order to make profits out of the differences which may exist between various exchange rates at any time) also influence the rate of exchange.<sup>1</sup> Raising or lowering of the Bank-rate also affects the rate of exchange. The demand for a country's currency will be more when the Bank-rate is high relatively to that of others, and, therefore, the rate of exchange will move in its favour and the demand will be low when the Bank-rate is low relatively to that of others and, therefore, the rate of exchange will move against it.

Besides the above factors, the financial operations undertaken by governments *e.g.*, transfer of debts between governments, repayments of loans, payments of interests, etc., and speculative activities, that is, sale or purchase of foreign currency by speculators with a view to make profit also influence the rate of exchange. Conditions of currency also exercise considerable influence on the rate of exchange. For example, the demand for a country's currency will fall if there is a likelihood of over-issue of paper money and hence, depreciation of the currency and in an extreme case, there may be a 'flight' of capital as it happened in Germany after 1918. Finally, the political as well as the industrial conditions of a country also influence the rate of exchange since they influence the international capital movements.

**Limits to the Fluctuations in the Rate of Exchange under Gold Standard :** Under gold standard, wide fluctuations in the rate of exchange are not possible, for, the actual rate of exchange, when there is gold standard, can fluctuate

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<sup>1</sup> **Arbitrage Operations :** There are professional dealers in foreign exchange, who earn profit by buying up a currency in a centre where it is cheap and selling it in another centre where it is dear—the margin of difference being their profit. The arbitrage operations refer to these operations in exchange by which these dealers earn profit from these differences in the rates of exchanges for the same currency ruling in two or more centres at the same time. By such operations, they, in practice, force up the undervalued currency and push down the overvalued currency and thus correct the inconsistencies, if there be any.

around the *mint par* of exchange only within the narrow limits set by the gold points. When two countries are on gold standard, the amount of pure gold contained in the coins of each determines the *mint par* and the actual rate can deviate from this par only by a small amount due to the cost of transport, loss of interest during the period of transit, etc., that is, in other words, the actual rate can fluctuate only within the limits fixed by the gold points. If, for instance, a pound contains as much pure gold as 4.86 dollars in U.S.A. then the mint par or the par rate of exchange between £ and \$ will be  $\text{£ } 1 = \$ 4.86$  and the rate of exchange will fluctuate above or below this par rate but only within the narrow limits of gold points. That is, although, £ 1 can be exchanged for 4.86 dollars, when the par rate of exchange is  $\text{£ } 1 = \$ 4.86$ , export of gold involves certain expenditures *e.g.*, cost of transport, insurance charges, etc., and the actual rate of exchange can deviate slightly from this par because of these expenses. And the *gold export point* is known when these expenses are added to the *mint par*. Similarly, the *gold import point* is known when these expenses are subtracted from the par rate.

Let us take an illustration: Suppose that the par rate of exchange between U.K. and U.S.A. is  $\text{£ } 1 = \$ 4.86$  and these expenses (*i.e.*, the expenses of shipping, insurance, etc.), of sending gold worth one pound sterling from New York to London is \$ .6. Suppose, further, that in a given year U.S.A. has imported from U.K. more than it has exported. Under these assumptions, the maximum price at which the American importers will be prepared to buy pound sterling on American foreign exchange market instead of sending gold to U.K. will be \$ 4.92 *i.e.*, \$ 4.86 plus \$ .6, (the gold export point). If the price is higher than this, they would prefer to send gold, for that would be cheaper.

Similarly, if U.K. imports more than it exports to U.S.A. the maximum price the importers in London would be prepared to pay for buying dollar will be \$ 4.86 minus \$ .6 *i.e.*

\$4.80, (gold import point). The rate of foreign exchange cannot be below this rate. Under gold standard, therefore, the rate of exchange remains fairly stable because, if the market rate deviates further from the limits set by the *gold points* then movements of gold will take place. These gold movements, as we have seen, when studying the mechanism of gold standard, will set in motion forces which eventually will remove the causes of disequilibrium, which necessitated such gold movements. The rate of exchange, that is to say, usually neither rises above the maximum rate (par value plus the cost of transport of gold) nor falls below the minimum rate (par value minus the cost of transport of gold). For, if it does, then, in the first case, persons who have to remit money abroad, will find it cheaper to send gold and incur the cost of transport rather than buy bills at a rate exceeding the par value of exchange by the cost of sending specie and, in the second case, those who have money owing to them from abroad *e.g.*, exporters and others will find it cheaper to call for gold from the importers or debtors abroad, rather than sell their bills at a rate which falls below the par of exchange by more than the cost of importing gold.

It should, however, be noted that so long as the gold contents of the coins do not change, the mint par remains stable but the gold points may change because of an increase or a decrease in the cost of transport, insurance charges, etc.

When, however, there is no gold standard and the countries are on inconvertible paper—the rate of exchange may fluctuate very widely with every change in the demand for and supply of foreign currency.

**Elimination of the Exchange Risks:** Traders, when there is no fixed parity, are obviously exposed to a good deal of uncertainty, and, hence, all foreign trade becomes risky. Before the First Great World War, such exchange risks were not so great because fluctuations in the exchange rates were restricted to the narrow limits of *gold points*, since the coun-

tries were on gold standard. But these risks and uncertainties become considerable when the countries are no longer on gold standard, but have inconvertible paper standards. What measures are usually adopted to eliminate these exchange risks? These risks are often sought to be eliminated by the inclusion of an Exchange Clause in the bills of exchange, that is, by the inclusion of a clause which, "fixes the *method* of arriving at the rate of exchange at which the drawee must pay the bill." When, for instance, contracts are made with the clause "Exchange as per Endorsement," it simply means that the rate of exchange at which the debtors will have to make payments is fixed in the contract. The clause, 'Exchange as per Endorsement', enables the bank in the exporting country, to whom the drawer sells the bill, to fix the rate of exchange at which the draft will become payable in terms of foreign currency. But the most effective method which is adopted with a view to eliminate or reduce unexpected losses due to wide fluctuations in the rates of exchange is Forward Exchange. What is meant by a forward contract in foreign exchange and how the risks of exchange are eliminated or 'hedged'? It can be illustrated thus: Mr. A, for instance, who has imported commodities worth £5,000 from England has to make payments for the imports after 3 months. Now, under independent currency systems, there are risks of fluctuations and, Mr. A, therefore, cannot be sure about the actual sum which he will have to pay after the specified period of time, that is, three months, in terms of rupees in order to get £ 5,000. To avoid such uncertainties, or the risks of exchange fluctuations, what Mr. A does is, he buys from his bank forward sterling at a rate agreed on now. In other words, he makes an arrangement with the bank and settles the rate at which it will give him £5,000, after three months and thus becomes certain about the sum of rupees that he will have to pay. Any individual thus may acquire command over foreign currency at a specified future date by making arrangements with banks or foreign exchange dealers, which will enable him to obtain a certain amount of foreign currency.

against payment on that date in domestic currency at a stipulated rate and thus avoid the risks and uncertainties of exchange fluctuations.

It is, thus, evident that there exist two rates of exchange viz., the "Spot rate", that is, the rate which actually prevails at the time of the contract for cash transactions and the 'Forward rate' for 'future' transactions, that is, for transactions in titles to foreign currencies at some future date. This forward rate is determined with reference to the spot rate and also the earnings on the foreign balance as compared with those on the short-term funds at home. And, the margin between the two rates depends upon (i) the cost of borrowing in the two centres and (ii) the degree of uncertainty or otherwise, of the future course of the exchanges.

By the use of the technique of the forward exchange market, thus, the traders and businessmen transfer the risk of fluctuations in the exchange rates to the banks. The risk, therefore, is only transferred but not eliminated altogether. Now, what the banks actually do to meet these risks? A bank will sell forward exchange at a discount from the spot rate, when the rate of interest abroad is higher than the rate of interest prevailing at home since in that case it will earn higher interest on its funds. If, however, the domestic rate of interest is higher than the rate of interest abroad, it will quote forward exchange at a premium over the spot rate i.e., it will charge a premium from the customers, since it will not meet the deficit in profits from its own pocket. In other words, the difference between the spot rate and the forward rate will depend on the rates of interest prevailing in the two countries. In some cases, the bank may simply offset two transactions by 'marrying them,' (that is, offsetting of future supply of foreign currency with its future demand). There are, for example, two traders and one of them asks the bank to buy a certain amount of foreign currency three months' forward and the other asks it to sell the

exact amount three months' forward. The bank in this case will 'marry' the two transactions, that is, will offset these two transactions without incurring any loss.

Besides, the difference between the rate of interest at home and abroad, the forward rate is also influenced by currency conditions *e.g.*, chances of appreciation or depreciation of currencies, speculative activities, etc.

**Fixed Vs. Fluctuating Exchange:** No one questions the desirability of stable rates of exchange. And the gold standard is often supported because the rates of exchange under gold standard, it is claimed, do not fluctuate abnormally. By ensuring stability in the rates of exchange, the gold standard eliminates the risks and uncertainties from the transactions with foreigners and thus encourages foreign trade and investment. But, even under gold standard, we know, the rates of exchange are not rigidly fixed—they fluctuate because there must always be some distance, however small, between the *gold points*. Besides, the maintenance of rigidly stable rates of exchange often subjects the internal economic system to inflationary or deflationary pressures which may not be desirable. Under gold standard, for instance, every country is forced to deflate or inflate its currency when other countries are deflating or inflating, for, every country must bring its price-level into line with the world gold prices. And it is now considered more important to maintain the internal economic stability and to keep domestic economy free from external disturbances and hence, freely fluctuating rates of exchange are considered more desirable than rigid exchange rates. When exchange rates are allowed to fluctuate freely, (that is, purchase and sale on foreign exchange markets are free from any interference and the governments do not influence these rates by undertaking the purchase or sale of foreign exchange) the domestic monetary policies will be free from external disturbances because these will be independent of the balance of payments situation.

But freely fluctuating rates are not without certain serious

defects. For instance, they will imply increased exchange risks and so will obstruct the free flow of goods and capital across national frontiers. Fluctuating exchange rates, again, are sure to discourage long-term foreign investments. And finally, when the rates of exchange are allowed to fluctuate freely, internal stability may not always be secured at the expense of external stability. For, fluctuations of exchange will affect the prices of imported and exported articles and, therefore, any abnormal fluctuations of exchange are likely to disrupt the internal stability also, because, the national price-level (comprising the prices of domestic as well as internationally traded goods) will be affected by changes in the prices of internationally traded goods, resulting from exchange fluctuations (which affect the prices of the imported and exported goods).

**Exchange Depreciation :** Exchange depreciation implies adoption by a country of a new and lower parity of exchange. When a country resorts to exchange depreciation, it means that it revises its exchange rate and fixes it at a lower level. Exchange depreciation thus denotes a type of flexible parity where revision of the rate of exchange is made in the downward direction only.<sup>1</sup>

Does exchange depreciation give a bounty to exports and, hence, stimulate a country's exports? It is true that so long as the internal prices and the costs (in the form of higher wages etc.) do not rise by the same percentage as the rate of exchange depreciates, the exporters receive more money by selling their goods in the foreign markets. But exchange depreciation cannot provide such stimulus for a long time and hence the producers of exported goods cannot enjoy the bounty for a long time. Because, gradually the internal prices and costs will rise and, sooner or later, they will rise by the same percentage as the fall in the rate of exchange, and hence, the bounty will disappear. Secondly, the possibility of enjoying a bounty by

<sup>1</sup> By flexible parity is meant that the currency of a country, though pegged to gold or some other currency, in actual practice is not legally so associated and it reserves the right to change the parity if it considers necessary.

exporting more also depends on the supply and demand conditions of the commodities in the foreign markets and, finally, the export advantage resulting from currency depreciation cannot be enjoyed for long because other countries may also resort to competitive currency depreciation or may levy anti-dumping duties and take recourse to quota restrictions, etc.

Depreciation of a currency, if it is over-valued, will be advantageous in so far as it will exert an inflationary influence and encourage investment in export industries. But the effects of exchange depreciation, if it leads to a deliberate under-valuation of a currency, will be deflationary. Besides, devaluation "can hardly be a recurring expedient. If a country devaluates its currency every time it suffers from an unfavourable balance, it will destroy the confidence of traders and speculators in the fixity of its exchange rate and lead them to expect further depreciation."<sup>1</sup> Such loss of confidence of traders will surely be detrimental to foreign trade.

**Exchange Control :** Direct participation in foreign exchange transactions was adopted by the Central Banks even during the 'twenties in connection with the gold or gold exchange standard. But, in later years, that is, in the 'thirties, after the abandonment of the gold standard and specially under the stress of the great depression, many Central Banks were given wide powers to acquire foreign exchange and control the exchange markets of their countries. In some countries Exchange Equalisation or Stabilisation Funds were brought into existence or, a system of general exchange control was introduced. During the 'thirties the regulation of the exchange rates was consciously adopted as a comprehensive instrument of economic or financial policy of the governments. This had been so because some sort of control was felt necessary to prevent abnormal fluctuations in the exchange rates and to make the rates of exchange different from what they would otherwise be, that is, without such control.

<sup>1</sup> Cairncross—Op. Cit. p. 368.



Now, what is meant by exchange control? By exchange control is meant a system in which the government of a country, with a view to controlling international transactions and the exchange value of its currency, intervenes to maintain a rate of exchange which is quite different from what would have prevailed in the absence of such intervention and to require the home buyers and sellers of foreign currencies to dispose of their foreign balances in particular ways. In the absence of any such intervention, the citizens of a country are free to buy and sell foreign exchange to any extent without any restriction. When, however, the government of a country desires to institute exchange restriction, the monetary authorities themselves buy or sell foreign currencies with a view to change the exchange rates in the desired direction or they may impose direct control on exchange operations both in matters of acquisition and allotment of exchange resources for various purposes. The purpose, in either case, obviously is to control the external value of the currency of the country.

**Objectives of Exchange Control :** There would be no need for control or management of exchange by a government were it satisfied with the rate of exchange determined by the free inter-play of demand and supply. It is thus evident that the exchange market is controlled by a government because it desires to make the rate of exchange different from what it would be without such control.

Exchange control may be instituted by a government with any of the following objectives.<sup>1</sup>

(i) To maintain the exchange value of the currency at a level which is higher than what would have prevailed in a free market, that is, in the absence of such control ;

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<sup>1</sup> Exchange Control may also be resorted to for protective purposes and the object, as in the case of Chile, may also be to obtain revenue. A country, again, may adopt a policy of exchange control with a view to favour trade relations with particular countries. And with this end in view, it may prescribe special exchange rates for the goods of the favoured countries.

(ii) To depress the exchange value of the currency below the free level ;

(iii) To keep the exchange value of the currency roughly stabilised over a long period of time, (that is, to keep it roughly equal to the value that would equate the demand and supply but to avoid all fluctuations which are likely in a free market).<sup>1</sup>

The objectives of the control, that is to say, may be 'over-valuation,' 'under-valuation' and 'stabilisation' or 'avoidance of fluctuation.'

A country may deliberately over-value its currency with a view to facilitate purchases from abroad. Great Britain, for instance, over-valued her currency during the First Great War for facilitating purchases from the neutral sources. Secondly, over-valuation may be resorted to by a country, which has contracted a large foreign debt and has to pay the interest or repay a part of the principal. Generally speaking, therefore, over-valuation proves advantageous for a country when it has to make heavy payments to others either for imports or in connection with debts. Often, again, a country resorts to over-valuation of its currency for purely psychological factors.

But over-valuation has serious consequences which should not be overlooked. The internal prices of a country whose currency is over-valued (that is, the value of whose currency is fixed at a level higher than what would otherwise have prevailed) are higher than the corresponding prices elsewhere. It, therefore, leads to contraction of exports and expansion of imports (assuming no preventive measures like tariffs, quotas, etc., are adopted) and diminution of economic activity at home.

In view of these serious consequences, often countries take recourse to under-valuation of their currencies (that is, keeping the value of the currency at a level lower than what would otherwise have prevailed in a free market). The effects of under-valuation are the opposite of those of over-valuation. A coun-

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<sup>1</sup> Exchange control, by checking the flight of capital, also helps to stabilise the rate of exchange.

try may deliberately under-value its currency to encourage exports and discourage imports and also to give support to the general level of prices. But deliberate under-valuation of a currency may lead to competitive exchange depreciation by others and hence, no gains may accrue from such deliberate under-valuation of a currency. Besides, under-valuation may be advantageous for countries like New Zealand whose foreign trade is important to themselves but unimportant in comparison to the total world trade. But it is not likely to be successful in a country like U.S.A., whose foreign trade, though constitute a considerable proportion of the total of world trade, yet, compared with the total American production and trade, is unimportant.

Thirdly, a country may resort to exchange control with a view to avoid fluctuations. Avoidance of exchange fluctuation is no doubt a plausible objective of monetary policy in theory but, in practice, it is "difficult to define and execute." "The objective," observes Crowther, "should be to prevent those fluctuations of the free market rate which are purely adventitious or temporary without interfering with changes of rate which correspond to real alterations in the respective values of the different currencies."<sup>1</sup>

**Methods of Control :** There are different methods which the government of a country may adopt with a view to control the exchange rate. The following are some of the methods which are usually adopted.

1. *Intervention.*—In order that the control may be effective, the government of a country should be able to influence the demand for and supply of currencies in the foreign exchange market. Broadly speaking, therefore, a government may, if it wants the rate of exchange to be different from what it would be without its intervention, that is, by the forces of demand and supply in a free market, either enter the exchange market on its own account and add to the demand for or the supply

<sup>1</sup> Crowther—Op. Cit. p. 243-4.

of the currency in which it is interested, or, it can prevent some of the existing demand or supply from reaching the market. That is, it may adopt the policy of Intervention or Restriction.

When a government adopts the policy of Intervention, it enters the foreign exchange market with a view to hold the value of its currency up or to hold it down. When the object of Intervention is to keep the currency up to a fixed exchange value, the currency is said to be 'pegged' at that value. Usually, by 'pegging' we mean 'pegging up' but we may use the term 'pegging down' when the object is to maintain the currency at a fixed under-valuation.<sup>1</sup> In any case, the object of exchange pegging is to minimise fluctuations in exchange rates by fixing an official rate.

Intervention, however, does not necessarily mean fixed rates. A government, if it so desires, may intervene to support or depress the value of its currency without caring for a fixed rate. But its ability to control the exchange rate by Intervention entirely depends upon the resources which it can utilise for the purpose. And it should also be noted that Intervention is possible only temporarily and not permanently.

**Restriction :** A policy of Restriction involves a compulsory reduction by the government of a country of the supply of its currency coming into the market with a view to maintain the value of the currency by thus increasing the demand relatively to the supply. The government, in order to achieve its end, curtails the freedom of the market by various ways and may centralise all trading in foreign exchange in the government or its agents and also may make it necessary to obtain permission from it before the national currency can be offered in exchange for any other.

**Compensation Agreements :** Compensation agreements are much like the barter agreements. By such agreements, the traders in two countries make their own arrangements for ex-

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<sup>1</sup> See Crowther—Op. Cit. p. 248.

changing their goods. Imports, that is to say, under such arrangements, compensate for the exports—eliminating thus the necessity of any settlement in foreign exchange. For example, the country A sells cotton goods to the country B of a certain value, and in exchange B supplies A woollen goods of an equivalent value, at a rate of exchange mutually agreed upon by both of them. Imports thus compensate for the exports and no balance is left necessitating settlement in foreign exchange.

**Clearing Agreements :** Exchange control gave rise to clearing agreements. By clearing agreement is meant an undertaking by two (or more) countries to buy and sell goods and services to each other at mutually agreed exchange rates, against payments by buyers entirely in their, *i.e.*, buyers' domestic currency and the balance of claims, if there be any, are settled, as between the Central Banks at the end of stipulated periods, either by payment in terms of gold or an acceptable third currency, or, it may be agreed upon that the balance should be allowed to accumulate for another period in which the creditor country works off the balance by extra purchases from the other country.

**Payments Agreements :** A Payments Agreement may be said to be an arrangement made with a view to obtain payment reciprocity without altering the usual procedure of making foreign payments through the exchange market. Each country, under this arrangement, agrees to establish a method of control by which its citizens are made to buy goods and services from the other in amounts equal to the latter's purchases from it (*i.e.*, the first country). In other words, a country with a credit balance is forced by the country with a debit balance to increase its volume of purchases from the latter (*i.e.*, the country with a debit balance).

**Blocked Accounts :** Under the system of 'blocked accounts' the debtors are compelled to pay their debts to the foreign creditors into accounts in the Central Bank standing in the names of the foreign creditors. These accounts are said

to be 'blocked', because, they cannot be converted into foreign currency. These accounts, however, may be used by the creditors for any purpose within the debtor country.

In Germany, for instance, the 'blocked accounts' meant the deposits in marks at the Reichsbank in favour of foreigners and these funds could be used only for specific purposes or for so-called 'additional exports'. Often, the foreign owners of these blocked accounts were compelled to sell their funds even at a discount.

**Advantages and Disadvantages of Exchange Control :** If judiciously adopted, exchange control may encourage exports and also may succeed in reducing the consumption of unnecessary imports. Exchange control, in the second place, by eliminating frequent and abnormal fluctuations in the external value of a currency checks speculative activities and stimulates foreign trade since the traders are relieved of the anxiety and risk arising from the uncertainty of exchange fluctuations. Exchange control, during the years of depression, enabled the debtor countries to purchase from each other and also from financially stronger countries and thus served to stimulate foreign trade. Besides, as Hansen observes,<sup>1</sup> for primary producing countries aspiring to industrialise their economies, such control may be necessary.

Whatever the advantages of a system of exchange control, it has serious defects, too. In the first place, the system kills economic incentive and obstructs free flow of goods as well as capital and leads to discriminatory regulation of foreign trade. The system of such control, moreover, tends to bilateralize trade relations between any pair of countries which otherwise might not have been the case. Finally, exchange control often encourages evasion, demoralisation and various other corruption.

**Exchange Equalisation Account :** In 1932, the Exchange Equalisation Account was established in England with the object of controlling abnormal fluctuations in the rates of foreign

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<sup>1</sup> Hansen—America's Role in the World Economy, p. 185.

exchange which the country experienced after the suspension of the gold standard and thus to insulate the internal monetary market from the harmful effects of such fluctuations. The object of the Account was, therefore, neither to over-value nor to under-value the pound. It was established with a view to smooth out temporary fluctuations and to offset speculative movements in sterling exchange rates and also to offset, as it has been said, the inward and outward movements of 'refugee capital', while allowing the 'real' causes to affect the long-term trend.

When the Exchange Equalisation Account was established in 1932, it had a capital of about £175 millions. But gradually this amount was raised and in the year 1937, the total funds amounted to £575 millions.<sup>1</sup> The Exchange Equalization Account is controlled by the British Treasury and its day to day business is conducted by the Bank of England as the agent of the Treasury. The main object of the Account, as has been said, is to prevent fluctuations in the sterling exchange rates and, with this end in view, the Fund is utilised for buying and selling sterling in exchange for foreign currencies when considered necessary *e.g.*, the Account sells sterling to those foreigners who desire to transfer their funds into sterling and thus prevents any rise in the sterling exchange rate. The main objects for which the Account is operated are, in brief, the following: to counteract against any undue buying and selling of sterling, to exchange sterling only for those foreign currencies which are convertible into gold on demand, and to offset an influx or efflux of foreign capital and thus to insulate the internal economy from any undesirable external influence.

The Exchange Equalisation Account worked smoothly so long as U.S.A. and France were on gold standard. For, the value of dollar and franc, in terms of gold, was more or less stable, or fluctuated a little in relation to one another. At

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<sup>1</sup> The resources of the Exchange Equalisation Account consist of sterling in the form of Treasury Bills, and gold purchased in the open market or bought from the Central Banks of France and U.S.A.

first the Account purchased dollars in exchange for sterling which were converted into gold in New York and no difficulty arose. When, however, in 1933 U.S.A. abandoned the gold standard, the Account operated in francs, and converted them into gold in Paris. But the position became difficult when gold standard was abandoned by France also. And, complications arose after the collapse of the Gold Bloc and the depreciation of dollar and franc. For, it was surely risky for the Exchange Equalisation Account to carry on transactions with the principal currencies, if they were not interchangeable with gold on demand. The difficulty was, however, avoided by the Tripartite Currency Agreement between England, France and America of 1936, under which the countries agreed to buy from each other their own currencies in exchange for gold within the next 24 hours.

The establishment of the Exchange Equalisation Account obviously has proved the ability of the device to 'iron out' temporary ups and downs in the exchange rates. And since, the operations of the Account are kept secret, it succeeds in avoiding the undesirable influences of speculation in exchange.

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## CHAPTER 34

### THE THEORY OF EMPLOYMENT

**The Meaning of Unemployment :** Generally speaking, everybody has some idea, may be in a vague way, about what is meant by 'unemployment.' For, the most baffling problem for the statesman, as well as for the economist today is the problem of unemployment, on the satisfactory solution of which depends in no small measure the existence of the edifice of the capitalist system. And a study of the problem of unemployment calls for precision about the concept itself.

Who is an unemployed ? Any man capable of working but not doing any work is not necessarily an unemployed man. For, there have always been parasites in society who voluntarily choose to remain idle. Sheer reluctance or idleness (or, even ill-health, sickness etc.) may thus prevent men from doing work and such people as remain without any work for such reasons are obviously not unemployed. Again, not only a man should be willing to work but he should be willing to work at the prevailing rate of wage. A man is not unemployed simply because he refuses to accept the current rate of wage and so remains idle. A person is unemployed only when he does not find any work although he is willing to work at the current rate of wage and, while we speak of the problem of unemployment, we have in mind this involuntary unemployment, that is, this inability of the willing workers to find work at the current rates of wage.

**Causes of Unemployment:** There may be several causes leading to unemployment. For instance, men may be thrown out of employment simply because changes in the consumers' preferences may lead to a fall in demand for certain articles. Changes in the fashion, habits, etc., of the consumers lead to mal-adjustments between the demand for and supply of labour and thus cause unemployment. Secondly, changes in industrial

organisation and technique of production, that is, changes in the structure of industry may lead to unemployment. Such unemployment is known as *structural unemployment*, and may be due to various causes, *e.g.*, introduction of labour-saving devices or adoption of an innovation which causes a shift in demand from one product to another and leads to mal-adjustments between the demand for and supply of services of particular types of labour, etc. Unemployment may also be caused by the migration of industry from one region to another. Again, there are industries which require large number of labourers but only for a certain period of the year and during the rest of the year these workers remain idle. Unemployment of this type is known as *seasonal unemployment*.

Unemployment may also arise because of fluctuations in the demand for labour in some industries which employ casual labour *e.g.*, docking, building, etc. For some days, the business may be brisk and a firm may employ considerably large number of men, while they will have no work when there will be less work of the firm. In fact, the number of workers which the firms in these industries employ fluctuate widely from day to day.

*Cyclical Unemployment* : In the capitalist system a no less important cause of unemployment is the trade cycle. So far we have discussed unemployment as it exists or occurs in particular trades or group of industries. But there may be unemployment of a more serious and general character affecting the industries in general and in several countries simultaneously. History of the past years will show that there have been a fairly steady alternations of booms and slumps with the consequent fluctuations in the demand for labour—increasing during the periods of optimism and prosperity, and declining during the periods of depression and all-round pessimism. Unemployment resulting from the wave-like or cyclical fluctuations in industries in general is known as *cyclical unemployment*. In a capitalist system the volume of employment is largely

governed by movements of these trade cycles—increasing during the boom and falling during the slump. The trade cycle has, therefore, appropriately been said to be primarily “an employment cycle.”

According to the classical theory, however, under conditions of full equilibrium there can be no unemployment. Such unemployment as may exist at any time, according to this theory, is either of *frictional type*, that is, arising from shifts in demand and the consequent temporary mal-adjustment, or, of *voluntary type*, that is, arising from the unwillingness of the labourers to accept a cut in the rate of real wages. In other words, when there is competition among the labourers, willingness of the unemployed workers to accept lower and lower wages will eventually lead to full employment and thus under conditions of equilibrium, there cannot exist any unemployment, besides, of course, the unemployment of *frictional* or *voluntary type*.

According to Keynes, however, men may not find jobs and, therefore, may remain unemployed, even if they are willing to work for less than the current real wage. That is, there may exist what he says, *involuntary* unemployment. “Men are involuntarily unemployed,” according to Keynes, “if, in the event of a small rise in the price of wage-goods relatively to the money wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment.”<sup>1</sup>

Unemployment, thus, simply may be due to the fact that the current demand for goods and services is insufficient to absorb the services of all available labour into different occupations. Now, increased demand for goods and services and, therefore, more employment, is only possible if people spend more on consumption or on investment. But people spend proportionately less on consumption when their money incomes

<sup>1</sup> Keynes—General Theory of Employment, Interest and Money, p. 16.

increase, hence, the cure for unemployment lies in expanding investment in capital goods sufficiently.

There have been various suggestions for removing unemployment but no single remedy can be suggested. Re-organisation of industry, suitable provision for subsidiary occupations, increasing mobility of labour, suitable monetary and investment policies, are some of the generally accepted remedies of unemployment.

**The Theory of employment :** We have discussed the meaning of unemployment. Now it is necessary to understand the concept of full employment. Full employment, it should be remembered, does not mean complete absence of unemployment, or, in other words, 100 p. c. employment. For, there will always remain some men out of employment, *e.g.*, those who have left one job and are seeking another, or those who are seasonally unemployed, or, are waiting for fresh training for different occupations, etc. At any given time, therefore, full employment does not mean that no man remains unemployed. It refers only to the state in which unemployment of the *involuntary type* is kept as low as possible.<sup>1</sup>

**Keynes' Theory of employment :**<sup>2</sup> When the effective

<sup>1</sup> For Keynes' definition of 'involuntary unemployment' see p. 466.

<sup>2</sup> Keynes, in his *General Theory*, maintains that saving and investment must necessarily be equal. By saving is meant the income which is not spent, it is the "excess of income over expenditure on consumption" and by investment is meant the output which is not consumed, *i.e.*, it is "that part of the income which has not passed into consumption." Since income and the value of the current output are equal it naturally follows that savings and investments are equal. In other words, in the community, when some people save more, they obviously spend less on consumption goods and this, in its turn, reduces the saving capacity of other people. In the end, therefore, the aggregate savings and aggregate investments of the community must remain the same as before. "Whilst, therefore," observes Keynes, "the amount of saving is an outcome of the collective behaviour of individual consumers and the amount of investment of the collective behaviour of individual entrepreneurs, these two amounts are necessarily equal, since each of them is equal to the excess of income over consumption." (Keynes—*General Theory*, p. 63).

If, for instance, those who save hoard, it will simply mean that others, whose incomes will fall, will dishoard. Again, if the ~~entrepreneurs~~ ~~invest~~

demand, that is, the demand for the output as a whole is high, the volume of output to be produced will also be more and hence, the volume of employment to be offered to the factors of production will also be more. Given the technique of production, the volume of employment, according to Keynes, therefore, is uniquely correlated with the volume of output. The three fundamental psychological factors which, according to Keynes, determine the national income and the quantity of employment are: the psychological propensity to consume, the psychological attitude to liquidity and the psychological expectation of future yield from capital assets.

Now, increased effective demand is possible if the rate of total spending increases, that is, if the consumers spend more on consumption and thereby increase the demand for consumption goods which, in its turn, will lead to more employment or, if firms or the government spend more on investment leading to an increased demand for investment goods and, therefore, to employment of more men in the production of those goods. At any given moment, therefore, the effective demand (which is equal to the total sale proceeds of output) depends upon consumption-expenditure and investment-expenditure. Now, what are the forces which govern these two types of expenditures, that is, consumption-expenditure and investment-expenditure? The volume of consumption-expenditure depends mainly on the level of money incomes of the individuals. That is, more or less

more than the community intends to save, increased investment will lead to increased income, and hence, to increased spending on consumption. Increased expenditure on consumption will generate more income until, eventually, it becomes so large that the community saves as much as was invested and thus i.e., through changes in income, an equality is brought about between saving and investment. Alternatively, if more is saved by the community, eventually, the equality between saving and investment will be brought at a lower level of income.

All this can be illustrated in the form of the following equation:

$$\text{Saving} = \text{Income} - \text{Consumption.}$$

$$\text{Consumption} + \text{Investment} = \text{Value of output} = \text{Income}$$

$$\text{therefore, Investment} = \text{Income} - \text{Consumption} = \text{Saving}$$

$$\text{therefore, Investment is equal to saving.}$$

will be spent on consumption, according as the incomes of the individuals, are larger or smaller. But it is important to note that increase in consumption is not proportionate to the increase in incomes. Consumption-expenditure increases when the aggregate income increases but it does so by a smaller amount. This psychological relation between income and consumption is described by Keynes as the "propensity to consume" or the 'consumption function'. In other words, the propensity to consume is the ratio that measures the relation between income and consumption. It is known by dividing the total consumption by the total income and the marginal propensity to consume is known by dividing the increase in consumption-expenditure by small increase in income. It is thus the relationship between an increment of income and the expenditure on consumption out of this increment.<sup>1</sup> From the marginal propensity to consume we can know how much income and employment will increase as a result of a given increase of investment. This is what is known as investment multiplier.

The factors which govern this propensity to consume are many, *e.g.*, customs of the community, the distribution of income, expectation of changes in prices, the rates of taxes, psychological characteristics of individuals, etc.

*Now, what are the factors which govern the volume of investment?* The investment-expenditure or the volume of investment<sup>2</sup> depends upon the employers' willingness to 'invest' *i.e.*, to add to the existing stock of real assets, like new factories, buildings etc. This willingness, again, depends on two things *viz.*, (i) *the marginal efficiency of capital, i.e.*, the expected rate of return on an investment or the expected profitability of new investments and (ii) *the rate of interest*. Other things being

<sup>1</sup> If, for instance, the marginal propensity to consume is  $\frac{2}{3}$ rd, it indicates that the consumers will spend  $\frac{2}{3}$ rd of any increase in their incomes on consumption and save the rest.

<sup>2</sup> By investment we have referred to private investment. The volume of public investment, at any given time, depends on the policy of the government and of various local bodies.

equal, the volume of investment will increase or decrease according as the marginal efficiency of capital will be higher or lower. The marginal efficiency of capital will, however, decline with every increase in the stock of investment goods until it becomes equal to the rate of interest. In other words, the volume of investment will be more or less according as the rate of interest is lower or higher. There will be an inducement to invest so long as the marginal efficiency of capital is greater than the rate of interest. According to Keynes, fluctuations in the marginal efficiency of capital are the fundamental causes of business cycles.

The important factors on which the marginal efficiency of capital depends are : the existing stock of this type of capital goods, current rate of investment in this field, and the state of business confidence. Besides these factors, there are other factors which affect the marginal efficiency of capital, *e.g.*, expected demand conditions of the product of the firm, the rate of increase of population, technological improvements and the rates of taxes.

*On what does the rate of interest depend ?* The rate of interest depends on the quantity of money and the demand for holding money which, in other words, means the preference for liquidity. The main four motives for which the people want to hold money, we have seen, are, the income motive, the business motive, the precautionary motive and the speculative motive.

*The Relationship between Investment and Income :  
The Multiplier and the Principle of Acceleration :*

“The cumulative nature of expansion and contraction processes is explained largely by the interplay of producers’ spending (investment) and consumers’ spending. The two-way relationship between consumption and investment has been discussed by economists under the heading “multiplier” (influence of investment on consumption) and “acceleration principle” (in-

fluence of consumption, or rather changes in consumption or income on investment)." <sup>1</sup> It is, therefore, important for us to know the implications of the theory of multiplier and the principle of acceleration.

A substantial part of newly created money when it has been spent for investment purposes, we know, is again spent on consumers' goods by those who earned it. The effect of this re-spending of this newly created money is known as the multiplier principle. The multiplier thus indicates the effect which an initial expenditure of money will have on income, provided, of course, we take into consideration only consumption expenditures. But it should be remembered that a net increase in consumption also leads to an increase of private investment. Hence, in order to determine the total effect of an initial expenditure upon income we should take this also into account. For, "changes in demand for consumers' goods are transmitted with increasing intensity to the higher stages of production." <sup>2</sup> In other words, an increase in income brought about by the rise in investment will lead to further private investment and the consequent increase of incomes. This is what is known as the *acceleration effect*. <sup>3</sup>

**Deficit Spending and Full Employment :** The volume of employment can be increased by increasing the volume of consumption-expenditure and also of investment-expenditure, which, in other words, means by increasing the volume of effective demand. Effective demand may be raised, that is, consumption may be stimulated by re-distributive taxation *e.g.*, by imposition of direct taxes at progressive rates with a view to transfer the purchasing power from the rich (having low propensity to consume) to the poor, (having high propensity

<sup>1</sup> G. Haberler—Prosperity and Depression, 3rd Ed. p. 473.

<sup>2</sup> Ibid—p. 86.

<sup>3</sup> The ratio of the secondary change in investment induced by the change in consumption-expenditure to the change in such expenditure is called the *acceleration co-efficient*. And the multiplier and the acceleration principle are determinants of what Prof. Hansen calls the *leverage-co-efficient* of initial expenditures. (A. H. Hansen—Fiscal Policy and Business Cycles, 1943, p. 224.)



to consume) and spending the proceeds of such taxes to subsidise private consumption. But such a policy may affect private investment adversely. Besides, the inequalities of incomes and other institutional factors in the capitalist societies make for a high propensity to save. It is, therefore, difficult to increase the propensity to consume sufficiently in this way. Hence, investment, both private and public, has to be stimulated in order to achieve full employment. Private investment may be stimulated by various ways *e.g.*, by adoption of what is said to be an 'incentive tax policy,' *i.e.*, by adoption of a 'modified' income-tax policy, by granting rebate on the corporation tax on undistributed profits, etc. Private investment may also be stimulated by adoption of a cheap money policy. But, in any case, in advanced industrial economies, at a level of income corresponding to full employment the gap between total income and total expenditure on consumption is so large that private investment is inadequate to fill it. "If full employment is to be maintained," observes Schumacher, "there must be, 'widening', *i.e.*, new equipment for the displaced workers, alongside with 'deepening' and thus an expansion in the output of marketable goods."<sup>1</sup> And, "there stands out the general fact that private net investment cannot continue for long without becoming purposeless, unless accompanied by an expansion in consumers' demand, and that that expansion, under conditions of full employment, is not automatically brought about."<sup>2</sup> The state, however, "can achieve and maintain full employment irrespective of the volume of private investment—by tax policy or deficit finance."<sup>3</sup>

Deficit spending or contra-cyclical fiscal policy implies that the government takes the initiative and with a view to achieve full employment raises loans and spends the sum on public in-

<sup>1</sup> E. F. Schumacher—Public Finance—Its Relation to Full Employment, Article in *Economics of Full Employment* (Studies in Applied Economics prepared at the Oxford University Institute of Statistics), p. 106.

<sup>2</sup> *Ibid*—p. 107.

<sup>3</sup> *Ibid*—p. 107.

vestment in a contra-cyclical direction. During a depression it adopts a Public Works Programme and also increases the effective demand by subsidising private consumption. In other words, the state should adopt a policy of deficit budgeting and maintain the total outlay at such a level as would ensure full employment. Public expenditure should, however, be cut down during a boom and the rates of taxes during such a period should also be raised. The surplus of the boom period may be utilised to wipe off the accumulated deficits of the depression period.

Nobody doubts the desirability of a policy of increasing public investment in order to raise the effective demand when private investment is inadequate, to the level required for achieving full employment. But still then there are certain obvious limitations of this policy. In the first place, it is held by some that adoption of such a policy would be at the expense of private investment. For, expenditure of funds raised by taxation or loans, only would substitute private spending by public spending. Secondly, deficit spending may force up the rate of interest and thus depress private investment. Thirdly, there is the risk of inflation if public works are financed by printing notes. Apprehension of severe inflation, if the policy of deficit spending is pursued continuously, is sure to kill the incentives of the business community. Finally, there is the danger of increasing the volume of public debts, which we cannot afford to ignore completely.

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## CHAPTER 35

### BUSINESS CYCLES

Economic progress has never been regular, because, the course of productive activities has never been regular. Trade has been good at some times and bad at others. A period of prosperity, characterised by increased productive activity, increased employment, and optimism has always been followed by a period of depression, characterised by diminished productive activity, fall in employment and pessimism. These cyclical fluctuations in business activities, the wave-like movements, which affect the whole economic system and are characterised by recurring phases of expansion and contraction are known as the trade or the business cycles.<sup>1</sup> Broadly speaking, a business cycle may be defined as an alternation of periods of prosperity and depression, that is, of periods of good and bad trade.

These fluctuations in business activity, *i.e.*, the alternating waves of expansion and contraction, are known as the business cycle because, they are cyclical in that the phases of contraction and expansion recur frequently in, more or less, similar patterns and there appears to exist a periodicity or regularity in the time intervals between the phases of the cycle. That is to say, although every cycle has some features peculiar to itself and no cycle is exactly similar to any other, still they do exhibit some likeness and as observes Pigou, though there may not be twins, all the "recorded cycles are members of the same

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<sup>1</sup> There are three distinct types of wave-like movements or *cycles* viz., (i) *the long-waves or the Kondratieff Cycles*: these refer to the long-period cycles of 50 to 60 years. So far only two full waves have been studied (1798—1814 and 1814—1896); (ii) *the short-waves* (*i.e.*, 9 or 10 years) or *the Juglar Cycles*: these refer to the cycles which occur with great regularity and have been carefully studied by economists. Most of the theories which we have discussed refer to this type of Cycles; (iii) *the shorter-waves or the Kitchin Cycles* refer to the shorter Cycles of 40 months each. A juglar cycle, that is to say, is convertible into three such cycles.

family.”<sup>1</sup> These cyclical fluctuations, again, are international in their incidence since prosperity or depression in one country tends to spread through the mechanism of international trade and foreign exchange, to every other country engaged in international trade. And although every industry is affected by these cyclical fluctuations and a cycle is synchronic in that the movements, both upward and downward, tend to occur at approximately the same periods in all the industries, the industries making producers’ goods or the constructional industries as they are called, *e.g.*, ship-building, etc., experience more violent fluctuations than do those producing consumers’ goods.

**The Phases of a Cycle :** “The ebb and flow of boom and slump” as Crowther observes, “form a continuous process, and the trade cycle can therefore be hardly said to have a ‘beginning.’”<sup>2</sup> Nevertheless, a whole cycle can be divided into four, more or less, distinct parts or phases, each having its own characteristics, *viz.*, (i) the prosperity phase or expansion ; (ii) recession ; (iii) contraction and, (iv) revival.

(i) After some originating force, which may be exogenous or endogenous, that is, which may originate either outside the economic system *e.g.*, war, invention, etc., or may be generated within it, starts the phase which is known as the *expansion* phase of the trade cycle. The characteristics of this phase are : expansion in the volume of bank credit as well as increase in the rate of circulation of this credit, an increase in the volume of employment, a rise in prices, increased profits of businessmen, higher wages, in short, this phase is characterised by a feeling of optimism and brisk productive activities all round. And the process continues in the following way : Capital is invested in competing industries which expand their capacity with a view to make profits from the prevailing high prices without regard to the depression in prices which such expansion in capacity will itself produce and eventually the boom sets in. The

<sup>1</sup> Pigou—*Industrial Fluctuations*, pp. 15-6.

<sup>2</sup> Crowther—*Op. Cit.* p. 101.

forces making for expansion, it should be remembered, are weakened by a series of limiting forces resulting from the process of expansion itself, *e.g.*, scarcity of factors of production, rise in costs, unwillingness of the banks to expand credit any more, decline in prices, etc., and ultimately, the forces that make for contraction become stronger than the forces making for expansion and the next phase of the cycle starts.

(ii) The *recession* has been defined as the turning point during which the forces that make for contraction finally win out over the forces that make for expansion. This phase of the cycle is characterised by liquidation in the stock market, strain and contraction in bank credit and beginning of the downward movement of the prices. Whether the recession will be followed by a crisis<sup>1</sup> or panic or not, depends upon the nature of the preceding rise and also on the banks themselves.

(iii) The *recession* is succeeded by the phase called *contraction*. It is characterised by diminution in economic activity and the consequent decline in output, in the volume of employment and fall in the average prices, due to reduction in bank credit, postponement of buying by the consumers in the expectation of a further fall in prices, or because of the apprehension of loss of employment. The costs and price relationships become distorted—the capital goods industries suffering more than the consumer's goods industries since cyclical fluctuations affect them more violently than they do the latter.

(iv) Finally, comes the phase known as the *revival* characterised by growing feeling of confidence and an atmosphere more congenial to enterprise<sup>a</sup> and productive activities. With the exhaustion of inventories and wearing out of consumers' durable goods, need arises for replenishing them at levels that cover the costs. Prices, therefore, cease to decline any more and some costs begin to fall. The consumers begin to buy and hence

<sup>1</sup>By crisis is meant a period of stress and strain. "Crises imply the overwhelming and simultaneous occurrence of inability on the part of independent entrepreneurs to pay their debts."—A. Wagner.

larger orders are placed with the manufacturers, either in order to replenish the traders' stocks, or in order to renew or expand capital equipment. In short, the upward movement gathers momentum and the revival is well under way. The cycle starts again and each phase comes in succession again.

### **The Theories of the Trade Cycle**

**The 'Sun-Spot' Theory :** W. S. Jevons who believed in the doctrine of the periodicity of crisis, sought to explain the periodic occurrence of crisis as the consequence of the periodic appearance of the 'sun-spots', *i.e.*, at intervals of ten or twelve years. Periodical appearance of spots on the surface of the sun, according to his Sun-Spot theory, causes variations in the solar heat and thus affects the agricultural harvests on earth and production in all industries periodically. When, for instance, sun's heat becomes less, the agricultural harvests become poorer, and the agricultural population has less money to spend and hence, all other industries automatically become depressed.

The sun-spots, by affecting weather, thus influence agricultural production and the prices of corn and other things and bring about depression.

**Criticism :** The theory exaggerates the influence of the climatic factor which is one of many factors which affect the course of the trade cycle. Besides, agricultural output and investment constitute in this age of industrialisation only a fraction of the total output and investment. Finally, the theory ignores the various other important causes *e.g.*, financial, industrial, social and psychological, which do affect the course of a trade cycle.

**Psychological Theory :** The processes of production, under capitalistic system, are round about—there being a considerable interval of time between the producer's decision to produce and the final flow of goods ready for consumption. Productive activities, thus, are undertaken in anticipation of future demand. In other words, the businessmen's decision is gov-

erned by considerations of prices, costs and the margin of profit which they expect to rule in future. There is uncertainty in all these *anticipations* and *expectations* and hence there is room for errors of judgement or of forecast. When the prospect appears to be bright and the producers expect large profits, they, being unduly optimistic, expand their productive activities. Optimism in one quarter generates optimism in other quarters, too. The upward swing of the cycle starts and the process continues until, eventually, the businessmen find that because of their errors of optimism, more have been produced than can be profitably sold, that is, the supply of the consumer's goods exceeds the demand and the glut of goods in the market cannot be sold at a profit; hence, they suffer losses. A wave of pessimism sets in. Businessmen become unduly pessimistic about the prospect of business and contract their productive activities—the downward swing of the cycle sets in. For, just as optimism in one quarter generates similar feeling in other quarters, similarly, pessimism in one quarter generates pessimism in other quarters, too. According to the psychological theory, the trade cycle is caused by these errors of optimism and pessimism, that is, by psychological causes which, according to Pigou, “consist in variations in the tone of mind of persons whose action controls industry, emerging in errors of undue optimism or undue pessimism in their business forecasts.”<sup>1</sup>

**Criticism :** Productive activities, it has to be admitted, are affected by the businessmen's errors of optimism and errors of pessimism and hence, the theory has certain element of truth in it. The theory, however, ignores the importance of the economic and monetary causes of the trade cycle which do influence the minds of businessmen. Finally, it is inadequate in that it does not throw any light on the important questions *viz.*, why does a boom start at all and why confidence revives?

**Monetary Theory of the Trade Cycle :** The monetary theory of the trade cycle whose chief exponent is Prof. Hawtrey,

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<sup>1</sup> Pigou—*Industrial Fluctuations*.

seeks to explain the trade cycle as a 'purely monetary phenomenon.' Business cycles, it is held, are caused by variations in the effective demand for commodities, that is, by the variations in the total money outlay of the consumers which, again, is determined by their money income.

Now, under the developed banking systems of modern countries, the principal means of payment is bank credit, which is elastic, that is, which is capable of expansion or contraction by those who control the policies. Since changes in the flow of money affect the course of the productive activities, the business cycle is said to be essentially due to changes in money supply produced by the banking system which, by lowering the rate of discount, or by purchase of securities, may create more credit and this additional money leads to a rise in the prices and prosperity in trade and, by raising the rate, may contract the supply, and thus may bring about a depression in productive activities. Expansion or contraction of credit generates the upward or the downward movement of the trade cycle. For, expansion of credit stimulates productive activities, community's aggregate money income increases and hence, the total outlay also increases, that is, the effective demand for goods increases. Larger orders are placed with the manufacturers by the dealers and traders. The community's money income rises further and so does its total outlay. The producers expand their capacity and produce more and the process leads to an increase in the demand for bank credit. But the banks cannot go on expanding credit indefinitely. The process of expansion will cease when the banks, because of depletion of their reserves, will no longer be able or willing to create any more credit, and as a restrictive measure, will raise the rate of interest. The higher rate of interest will discourage the dealers who work with borrowed money and are very sensitive to the changes in the rate of interest. They will, therefore, diminish their orders with the producers, who, in their turn, will curtail productive activities. Unemployment will ensue and consequently, the consumers'



money income and, therefore, their money outlay on consumers' goods will decline. Depression sets in and the businessmen demand less credit from the banks. Idle resources accumulate in the banks. The rate of interest is, therefore, again, lowered by the banks which, in its turn, again encourages the traders, who, now that the rate of interest has been lowered by the banks, again become inclined to increase their stocks and so, place fresh orders with the producers. The whole process of expansion starts again.

The trade cycle, thus, according to this theory, is a purely monetary phenomenon and the regular swings of a trade cycle are the results of instability of credit under modern conditions and a sound banking system can cure this instability by so regulating the volume of loans that the prices remain stable.

**Criticism :** There is no doubt an element of truth in the theory in so far as it states that the volume of credit, created by the banking system, that is, the flow of money, affects the course of trade ; an expansion of credit leading to an increase in the productive activities and a contraction, leading to a depression in these activities. But the trade cycle, therefore, cannot be said to be a purely monetary phenomenon, since fluctuations in the productive activities are not caused by monetary factors alone. There are economic causes, *e.g.*, ill-adjusted production, as well as, psychological causes of the trade cycle. The monetary theory is an inadequate explanation of the trade cycle, since it lays emphasis only on the monetary causes ignoring the other important factors.

**Over-saving or Under-Consumption Theory :** The fundamental cause leading to crisis and trade depression, according to this theory, is the lack of purchasing power in the hands of the consumers, that is, their inability to buy goods at prices which the producers consider remunerative, *i.e.*, which cover their costs. The modern society, according to Hobson, the best exponent of this theory in England, is characterised by unequal distribution of the national income. A very large portion of

this national wealth is owned by a very small class who are very rich (with low propensity to consume) and too small a share goes to the poor who constitute the majority. Hence, the former group saves because of excess of income and the latter is unable to consume because of lack of purchasing power. The trade cycles, thus, are caused by such over-saving by the rich and under-consumption by the poorer classes of people who constitute the majority.<sup>1</sup>

This unequal distribution of the national income results in a persistent tendency to over-saving and under-consumption. When the prospect is bright, that is, in times of brisk business, the savings of the rich are invested in business to produce more capital goods, and their incomes increase still further and so do their savings. But continuous investment of these savings to produce capital goods *e.g.*, machines, tools etc., result in larger and larger production of these goods, which, again are used to produce more and more consumers' goods. This leads to more production of consumers' goods than can be purchased by the consumers. There is thus a glut of goods in the market which cannot be sold at a profit and hence, depression sets in. Economic depression, thus, results from this unequal distribution of the national income and excess of savings by the rich and under-consumption, due to lack of purchasing power, by the poor.

**Criticism :** The theory of over-saving or under-consumption only seeks to explain the causes of the economic depression and does not furnish an explanation of the causes of the trade cycle. Besides, the basic assumption of this theory, that, by increased investment the businessmen will earn more incomes and hence, will save more, may not be always true, for, more can as well be spent by them on luxuries, etc. Finally, this theory is concerned only with the downward phase of the trade cycle and does not explain all the phases of it. Nor does it explain how the recovery starts again. It has been rightly ob-

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<sup>1</sup> The same theory is held in slightly different forms by Foster, Catchings, Major Douglas and others.

served by Haberler, that the under-consumption theory is a theory of the "crisis and depression, rather than a theory of the cycle."<sup>1</sup> The theory, however, lays emphasis on the important fact that, in the absence of increased propensity to consume, due to lack of purchasing power in the hands of the consumers, increased investment and production will eventually result in a glut of goods which cannot be sold at a profit and this will bring depression in trade.

**The Over-Investment Theories :** The central theme of all over-investment theories is the over-development of the capital goods industries in relation to the consumers' goods industries and they all start from the generally accepted fact that the capital goods industries are affected by the business cycles much more severely than are the consumers' goods industries, that is, those industries which produce for current consumption.

According to Dr. Hayek, the economic system is in equilibrium when the value of investment is equal to the volume of saving and it is the function of the "equilibrium" level of interest to bring about this equality between these two, *i.e.*, the value of investment and the volume of saving. Saving will be more than investment when the rate of interest is higher than this rate and when the rate of interest is lower than this, the demand for credit will be more than can be met from the current saving.

But the banks have got a very great power of creating credit and they can even lend at rates which are uneconomic. And, when the rate of interest is below this equilibrium rate, the entrepreneurs' demand for increased investment is met not from the genuine savings but it is met partly out of voluntary savings and partly out of the credit created by the banks. The consequence is over-expansion of capital goods industries and a change in the structure of industry. The demand for capital goods increases more than the demand for consumption goods which, in course of time, results in over-production.

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<sup>1</sup> Haberler—Prosperity and Depression (3rd Edn.) p. 119.

But this over-expansion of credit cannot continue for long.<sup>1</sup> Shortage of actual savings forces contraction of credit and leads to crisis and depression.

Dr. Hayek seems to assume that credit expansion is always harmful. But it is not always so. For instance, during periods of depression, expansion of credit is certainly beneficial. The theory of Dr. Hayek is also inadequate as an explanation of the phenomena of trade cycles.

**Keynes' Theory :** By business cycles are meant periodic fluctuations in the volumes of employment, income and output. The fluctuations in the volume of employment, and, therefore, in the volumes of income and output, are caused by the fluctuations in the marginal efficiency of capital. At any given time the volume of employment, according to Keynes, depends upon three variables *viz.*, the marginal efficiency of capital, the rate of interest and the community's propensity to consume. In the short period, the rate of interest and the community's propensity to consume remain more or less stable. Trade cycles, therefore, are caused by variations in the rate of investment caused by the fluctuations in the marginal efficiency of capital, which has been defined by Keynes in terms of the *expectation* of the yield and of the *current* supply price of the capital-asset. The marginal efficiency of capital has been defined by Keynes as, "being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price."<sup>2</sup>

The marginal efficiency of capital depends on three factors, namely, (i) the expected trend of prices ; (ii) the element of risk in enterprises ; and, (iii) the existing stock of capital goods.

<sup>1</sup> Expansion of credit leads to a rise in the price-levels of capital goods and consumers' goods. It becomes profitable to produce consumers' goods—and this lures away factors of production from the 'higher' to the 'lower' stages of production. Interest and wages rise—this rise checks the production of capital goods. Banking system raises the rate of interest. A period of painful liquidation and losses starts.

<sup>2</sup> Keynes—General Theory, p. 135.

Investment will increase so long as the marginal efficiency of capital is higher than the rate of interest. And, the expansion phase of the cycle is caused by the high marginal efficiency of capital relatively to the rate of interest. This phase is characterised by optimistic outlook of businessmen and increased investment, more employment, and rising incomes. Each increment of investment, as we know from the multiplier effect, causes a multiple increase of income. (Similarly, during the downward phase, every decrement of investment causes a multiple decrement of income.) But, an increase in the existing stock of capital goods and shortages and "bottle-necks" of raw materials and of labour, and the consequent increase of the cost of production of new capital assets lead to a decline in the marginal efficiency of capital. The *consumption function*<sup>1</sup> also explains that the cumulative process of expansion may inevitably lead to a crisis and a period of contraction even before the physical or financial limits to expansion are reached. The decline in investment is aggravated by the fact that while the marginal efficiency of capital declines, on account of higher liquidity preference the rates of interest do not fall.

All these give rise to pessimism and the downward movement of the cycle starts, that is, the volume of employment declines, incomes fall and depression sets in. The period of depression depends, according to Keynes, on the length of life of the durable assets and on the carrying costs of the surplus stocks. In course of time, the supply of capital goods becomes scarce through depreciation and the surplus stock of consumers' goods accumulated during the depression period is exhausted. Profits and expectation of profits increase and with the increase of the marginal efficiency of capital, recovery starts.

According to Keynes, the root cause of the business cycles thus is the fluctuation in the marginal efficiency of capital and

<sup>1</sup> The concept of *consumption function* explains the significant relationship which exists between income and consumption viz., consumption increases as the income increases but not so much as the income increases; and that, consumption decreases as the income declines, but not to the same extent as there is a decline in the income.

a judicious policy of increasing public investment can eliminate business cycles and secure full employment. Introduction of the consumption function is the most significant contribution of Keynes to the cycle theory. Unlike the theories of Pigou and Hobson and others, his theory is based upon a logical and well-co-ordinated theory of employment and hence, is generally accepted in modern times.

**Schumpeter's Theory of Innovation :** According to this theory, the business cycle is the result of innovation.<sup>1</sup> Innovations, in our present day dynamic economy, lead to increased demand for capital and, hence, to expansion. The process of expansion continues while an innovation is being put into effect. But the forces set in motion by an innovation carry with them the seeds of their own decay. For, while the factor-costs would tend to rise due to increased demand for productive services, the increased supply of the consumption goods, because of the innovation, will lead to a fall in the prices of these consumption goods. Profits decline and hence, further expansion becomes unprofitable; the bank-loans are paid off by the entrepreneurs who cease to expand their activities, that is, the process of contraction begins when the society adapts itself to the changes which the innovation calls for and depression continues until the readjustments required by the innovation take place.

According to this theory, then, by enlarging the demand for capital, an innovation engenders boom which is followed by depression—the period of depression continues until, the readjustments called for by the innovation take place. Through the periods of booms and depressions, that is to say, a dynamic society adapts itself to innovations *i.e.*, to technological changes.

The theory, however, seems to ignore the importance of the role of a sound banking policy, and to doubt the possibility of eliminating depression, by such a policy, without at the same time, eliminating the boom.

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<sup>1</sup> An innovation may mean (1) the introduction of a new product or a new method of production; (2) the opening of a new market; (3) the development of new sources of raw materials; (4) a substantive change in the organisation of business.

## CHAPTER 36

### THE OBJECTIVES OF MONETARY POLICY

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The advantages of a good monetary system in the economic organisation of the modern communities can, indeed, be hardly exaggerated. Nonetheless, money, inspite of the considerable advantages it secures to the community, has serious disadvantages, too. For instance, fluctuations in prices and the ebb and flow of the trade cycle, both of which result in considerable miseries to the modern communities, are due to the existence of money. It is, therefore, asked, what should be the objective of a monetary policy ? Or, in other words, what should be the 'ideal' behaviour of money ? Naturally, there are differences of opinion in the matter and we should, in brief, discuss some of these views.

**Monetary policy under the Gold Standard :** Under the pre-war gold standard, the objective was to keep the exchange rates stable, regardless of the consequences of such a policy on the internal economy of a country. For, stable exchange rates, it was believed, encouraged international trade and investment and were conducive to world's economic progress. But the gold standard broke down during the war and in the changed post-war world, operation of an automatic standard was impossible. We have already discussed how the restoration of the gold standard at pre-war parity only created fresh problems and hastened the great depression. Monetary authorities, for various reasons, now, in the changed circumstances, consider the internal stability of prices more important than the stability in the rates of exchange. In the first place, they hold, that endeavours to maintain stability in the exchange rates would often result in severe fluctuations in internal prices. Secondly, it is pointed out that stability of exchange rates does not protect the producer for export, because, while costs depend on the conditions prevailing within the country, the prices at which he

has to sell his products, depend on the world prices. Thirdly, we have seen, that under gold standard, while the stability of exchange rates can be secured within the narrow limits of the gold points, a serious defect of the system is that the internal economy is susceptible to adverse repercussions of disturbances elsewhere. These are no doubt serious limitations of the policy of maintaining stable exchange rates by allowing the internal prices to fluctuate. But we should not, therefore, hasten to adopt a policy of achieving the internal price stability by letting the exchange rates free to fluctuate. For, neither can we have stable rates of exchange by allowing domestic economy to fluctuate nor can we have stability in domestic prices (unless, we have in mind a closed economy) if the rates of exchange fluctuate abnormally. Our aim, therefore, should not be either external stability or internal stability, for, they are not 'absolute alternatives' but to harmonize the two with perhaps a bias in favour of a stable domestic economy.

Our next question is, what should be the tendency of the price-level in the long run? That is, should the ideal be a slowly rising price-level or a slowly falling price-level or, should we endeavour to stabilise the prices? Let us examine each one of these policies.

**The case for a slowly rising price-level :** A slowly rising price-level, it is argued, provides the incentive to enterprise and has the 'tonic effect' which the economic system needs to keep it 'working'. Besides, by stimulating productive activities, a policy of gently rising price-level will secure fuller utilisation of a country's resources and, therefore, the wealth of the country will increase more during the period of rising prices than it will when prices are kept stable or are falling. Finally, it may be pointed out that the "world has found a gently rising price-level necessary to keep the steadily mounting burden of money debt from becoming a burden. Humanity is so constituted that it cannot get on without going into debt to itself—debt is, indeed, the legacy of every depression—and it is far better to



solve the resulting social problem by the gradual, partial and imperceptible default of rising prices than by recurring violent clashes of debtors and creditors.”<sup>1</sup>

These are no doubt plausible arguments in favour of a policy of allowing the prices to rise slowly. But such a policy has defects, too. It is pointed out, for instance, that it will give shelter to the inefficient producers who would otherwise not be able to stand competition. Secondly, it is asked, does the economic system really stand in need of such an extra stimulus? The assumption that it does, is questionable, for, even under stable conditions the businessmen earn profits and the stimulus is provided by the usual ups and downs of individual industries. Finally, a policy of rising price-level, it is said, will lead to undue expansion of the capital goods industries, which, if not checked, will eventually plunge the country into economic depression with all its evils. The periods of rising prices, thus, are dangerous, since they contain within themselves the seeds of future depressions. Those with fixed money incomes also suffer during the periods of rising prices.

Rising prices, however, may provide the stimulus if there is no simultaneous rise in the factor-costs. But when the prices rise, the prices of the factor-units are unlikely to remain stable for a long period and when these factor-costs also rise, the incentive obviously vanishes. So long, however, as there is unemployment, a slowly rising price-level may be desirable.

**The case for a slowly falling price-level :** A slowly falling price-level, as against a rising one, it is argued, will increase the real wages of the wage-earners and others with fixed money incomes. Secondly, it is argued that, since the productivity of the whole economic system is increasing, because of the introduction of scientific methods of production, the price-level should fall by the same proportion as the productivity increases, so that the society may enjoy the benefit of the progress.

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<sup>1</sup> Crowther—Op. Cit. p. 178.

Moreover, the people with fixed money incomes can share the benefits of the progress and prosperity only in the shape of falling prices. Maintenance of stable prices when the productivity increases will only swell the profits of the businessmen (for, wages are sticky, and do not increase, at least proportionately, to the increase in the productivity) and lead to undesirable over-expansion of capital goods industries with all its disastrous consequences. In a progressive economy, therefore, a slowly falling price-level is desirable so that the prosperity may be shared by all.

It thus appears that the case for a slowly falling price-level is also no less strong. But there are certain practical difficulties in adopting the policy. For instance, it is difficult to know accurately the current rate of economic progress until it has already taken place and in view of the existence of imperfect competition, monopolies and combinations, etc., it is no easy task to decide how much the prices should be falling after each unit of time.

**Stable Prices :** Since money is a measure of value, the aim of monetary policy should be to maintain stability of its value. That is, money as a measure of value should provide a constant unit of measurement just as a seer or a pound as a measure of weight is always of the same weight or as a yard provides a constant unit for measuring distance.

Secondly, it is hardly possible to exaggerate the evils of instability of prices and the damages of the business cycles from time to time. These evils, it is suggested, may be, to a large extent, mitigated by maintaining stability in the value of money. In other words, elimination of abnormal fluctuations in the prices will encourage productivity and make for progress.

Thirdly, we have seen that a policy of rising or of falling prices, affects different sectors of the community in different ways *e.g.*, when the prices rise, the wage-earners and those with fixed money incomes suffer and when the prices fall, the debtors suffer. Hence, a policy of maintaining the stability in prices,

that is, in the value of money, will affect neither favourably nor unfavourably any section of the community and so will cause no injustice to any section.

None perhaps would oppose if the stability in prices could be secured and the community could be spared of the evil effects of the trade cycles from time to time. But there are certain obvious practical difficulties. In the first place, there are different price-levels, *e.g.*, wholesale, retail, etc. Now, we have to stabilise the retail prices, if we are to stabilise the value of money, since, it, that is, the value of money can be measured by the goods and services which enter into final consumption. But any accurate construction of an index number of retail prices is hardly possible in view of the insufficiency of data which are available. The changes in the quality of the articles also present difficulties. The other alternative is to stabilise the wholesale price index. But that, too, as we have seen, is not without defects.

Secondly, in a progressive community, when the productivity increases due to economic progress, introduction of technological innovations, etc., maintenance of stable prices will only swell the profits of the businessmen and lead to over investment and the eventual collapse, as it actually happened in the U.S.A. Similarly, for a community where there is unemployment, not the policy of stable prices, but that of a slowly rising prices is more desirable to provide the necessary stimulus to productive activity and thus to secure full employment.

**Neutral Money :** Stable money, thus, does not secure economic stabilisation. Besides, the degree of manipulation the policy of stable money requires of the monetary mechanism is not desirable in a dynamic economy where constant introduction of innovations and the consequent reduction in the costs are taking place. Hence the suggestion for a currency system under which money should be *neutral*, that is, an entirely passive factor. Prof. Hayek is the chief exponent of this ideal of neutral money policy, *i.e.*, the policy that the effects of money

on the prices should be neutral or, in other words, the ratios of exchange which would have prevailed under a barter system, (that is, in the absence of use of money), between different commodities should not be distorted by the introduction of money.

But how to secure, in practice, this ideal of neutrality of money? The policy can be made effective, it is suggested, if the banks maintain an approximately unvarying supply of the total volume of effective money and credit, so that a fall in the price-level would exactly correspond to the reduction in the unit-cost due to increased economic efficiency. That is, the supply of money would not change in response to change in the supply of goods but the prices would automatically fall or rise when there would be an increase or a decrease in the volume of goods. The price-level would thus vary inversely with the productive efficiency, falling when the productive efficiency increases and rising when the productive efficiency decreases. The quantity of money, however, should not be rigidly constant under all circumstances. Allowance has to be made for, say, changes in the population or in the velocity of circulation of money, etc. It should be, for instance, increased when vertical disintegration, that is, an increase in the number of stages in the processes of production, leads to a greater demand for money. Similarly, the quantity of money should be increased when the velocity of circulation of money falls.

Such a policy has great advantages. In the first place, if effective, it would not distort the 'real' ratios of exchange through changes in the quantity of money, since, the supply of effective money and credit would be kept approximately unvarying and the price-level would vary inversely with the productive efficiency. Smooth adjustments to the changes in the technology which it would ensure, would thus eliminate severe fluctuations in business activities, that is, the business cycles. Secondly, the creditors and investors also would secure the benefit from the falling prices, that is, they would share the

fruits of prosperity of the community in the form of falling prices resulting from increased productive efficiency. The wage-earners, too, would similarly be benefited since they would secure higher real wages, but, as Robertson puts "without having recourse to perpetual demands for a rise in money wages—demands which, whether or not they involve actual stoppages of work, certainly tend to embitter human relations and to devour the energies of constructive leadership." <sup>1</sup>

Nevertheless, there are certain great practical difficulties. Firstly, is it at all likely, under the existing conditions of market imperfections, that the prices would fall when, because of technical improvements, the costs would be reduced? In view of the market imperfections due to the existence of monopolistic and semi-monopolistic organisations, some prices would obviously be monopoly controlled and hence, would not fall even though technical improvements may effect cost-reductions. This would thus bring greater pressure on other industries, the prices of whose products must fall by greater degree so that the average prices should correspond to the average costs and they will, therefore, experience prolonged depression. The fruits of increased productive efficiency thus will not be equally distributed among the different industries.

Secondly, the efficacy of the policy depends on the ability of the Central Bank to change the quantity of money when the velocity of circulation changes or when there is a change in the integration of businesses. Is the Central Bank capable of doing this? How, for instance, the Central Bank is to know the degree of change which might have taken place in the velocity of circulation of money? Similarly, it is equally difficult for the Central Bank to know the change, if any, which might have taken place in the degree of vertical dis-integration of firms with a view to making necessary adjustments in the supply of money.

<sup>1</sup> Robertson—Op. Cit. p. 136.

**Monetary Policy and Full Employment :** The shortcomings of each of these policies thus prevent the acceptance of any as the ideal monetary policy in a dynamic economy like ours. Nor do the suggestions of stabilisation of income or of employment sound reasonable<sup>9</sup> in the present circumstances. Some, however, argue that the issue of credits may be avoided by the bankers if stabilisation of income can be achieved and thus economic fluctuations can be avoided. Similarly, it is advocated by some that stabilisation of employment also would eliminate economic fluctuations. But we can hardly afford to overlook the fact that stabilisation of income at the existing level, when there exist glaring inequalities in the distribution of incomes would create more socio-economic problems than it would solve. Similarly, under prevailing conditions, with the striking degree of unemployment, it is pointless to suggest a policy of stabilising employment at present level. The problem of unemployment has assumed greater importance since the last depression and it is now admitted on all hands that the goal of monetary policy is to maximise the national income by securing full employment in the economic system.

Unemployment in a competitive system, according to the classical writers, is just a temporary, a passing phase. For, the elasticity of the competitive economic system, it was held, would, in course of a reasonable period of time, absorb every one who seeks employment at a reasonable wage unless, however, monopolistic trade unions force up wages at a level which the employers can not afford to give. Prolonged unemployment, therefore, cannot exist in a competitive economic system, and, sooner or later, every body will get a job at a reasonable wage.

Modern economists, however, hold a different view. Full employment, according to them, cannot be achieved simply by a process of reduction of money wages. The problem of unemployment in the industrially advanced countries to-day is the problem of involuntary unemployment due to a deficiency of demand on the part of the community as a whole. Employ-

ment depends, according to Keynes, upon the expenditure of the community. Full employment cannot be achieved unless the community spends its total income on the production of a given period. The total income, however, may be spent on consumption goods and on investment goods in a certain proportion. If the total expenditure on consumption declines because some people spend less on consumption, it will lead to a deficiency of demand and the consequent unemployment for, the number of men engaged in producing consumers' goods will fall if the demand for such goods falls and production shrinks. This deficiency in consumers' expenditure, therefore, has to be compensated by increased expenditure on investment goods, if unemployment has to be avoided.

Full employment, thus, can be achieved either by stimulating the community's propensity to consume or by an expansion in the volume of investment. How can the monetary policy stimulate investment and how the propensity to consume can be increased to give support to the increased volume of investment?

Investment can be stimulated both in the private and the public sector. Private investment may be stimulated by adoption of what has been called a cheap money policy, that is, a policy of keeping the rate of interest low. Hence, the remedy for the problem of unemployment both, cyclical and chronic, according to Keynes, is the pursuit of an easy money policy which will increase the flow of money expenditure *i.e.*, effective demand, until the level of full employment is reached.

Unemployment will exist so long as there will remain a deficiency in the effective demand. In order to achieve full-employment, the aim of the monetary policy should be to stimulate consumption and to maintain the aggregate demand at a high level, until the stage of full employment has been reached. A policy of monetary expansion by the pursuit of a cheap money policy is the sovereign remedy for the malady of unemployment. Keynes also differed with the earlier thinkers who advocated a rise in the Bank-rate in order to check the boom.

According to him, the remedy for the boom is not a rise in the rate of interest but a fall in it. It is not by abolishing the booms that the remedy for the trade cycle should be sought but our endeavour should be to abolish slumps by stimulating investment by lowering the rate of interest and by thus maintaining a state of quasi-boom. "The right remedy for the trade cycle," observes Keynes, "is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom."

Whatever may be said in favour of a cheap money policy, the fact remains that monetary policy alone may not go very far as a remedy for unemployment, or the trade cycle. For, in the first place, if private investment declines due to a decline in the marginal efficiency of capital, that is, the expected rate of profit, it may not always be stimulated by lowering of the rate of interest, specially so, if the entrepreneurs are unduly pessimistic and hence, considerable public investment may be necessary to fill up the deficiency. Secondly, to stimulate consumption—redistributive taxation, with a view to securing a redistribution of income from richer to the poorer classes, is necessary. Such redistribution of income will no doubt increase the propensity to consume of the poor but a high rate of income-tax may have adverse effects, too. For, it may discourage businessmen and depress private investment and thus may lead to unemployment. It is thus evident that unless suitable fiscal policy also is adopted with a view to stimulate investment and consumption, only monetary measures cannot provide a remedy for unemployment. Some economists, *e.g.*, L. Robbins, Grant, and others also hold that continuance of a cheap money policy may lead to bad investment and a rise in the rate of interest is considered desirable to prevent the next boom.

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## BOOK VIII

### CHAPTER 37

#### PUBLIC FINANCE

**The Nature and Principles of Public Finance :** Remarkable extension of the sphere of the activities of the state and the growing consciousness about the need for such extension to increase the welfare of the community have, in recent times, focussed our attention on this branch of economics, *viz.*, public finance, which has been appropriately described as "one of these subjects which lie on the border line between economics and politics."<sup>1</sup> It is now being increasingly felt that social welfare largely depends upon the soundness of the finance of the public authorities, that is, on how they raise their revenues and spend them. Public finance has been defined as that branch of economics which studies the income and expenditure of the public authorities—including all governmental organisations and also provincial and local bodies, *e.g.*, municipalities, district boards, etc., and the adjustment of the one to the other.

The enormous sum which the modern governments raise as their revenue and their total expenditure bear testimony to the great importance which this branch of economics has assumed in the economy of the modern countries. No longer people subscribe to the *laissez-faire* school of thought of the 19th century which advocated for a policy of restricting the scope of state activities only to the political sphere and held that the ideal principles of public finance were to keep the burden of taxation as low as possible and to reduce the government expenditures to the minimum. Defence was considered to be the main objective of the government and hence, it was thought proper that the government expenditure on other activities, besides defence, should be restricted to the minimum. For,

<sup>1</sup> Dalton—Public Finance, (9th Ed., 1936) p. 3.

it was believed that spending by government, except for the purposes of defence, was necessary, whereas the individuals spend money for productive purposes. "The very best of all plans of finance," in the words of J. B. Say, "is to spend little and the best of all taxes is that which is least in amount."

These ideas are, however, no longer accepted. The growing complexity of the modern life has made it necessary for the state to extend its scope of activities to social and economic spheres. The ideal principle of public finance, therefore, no longer is that the state should tax as little as possible and spend as little as possible. It is now acknowledged that neither all taxes are bad nor all expenditures by the government, besides those incurred for defence, are unnecessary and unproductive. It is not a wise policy, it is now understood, which advocates that the state should curtail public expenditures in order to reduce the burden of the tax to be borne by the people. For, expenditures by the state for such purposes as improvements in education, health, etc., are of distinct advantage to the people as a whole and they increase the social welfare and also the productive efficiency of the people. Similarly, every tax is not an evil. A tax, for instance, on alcohol or other intoxicating drugs, by raising their prices and thus checking their consumption does some positive good to the society. On the other hand, it is true that, some public expenditures, as for example, expenditures on unnecessary war, etc., are certainly injurious and do no social good and hence, such expenditures mean waste of resources and, therefore, are undesirable.

What, then, should be the fundamental principle of public finance which should guide the public authorities? The public authorities have to take into consideration the effects of the burden of the taxes they may impose and also the effects of the expenditures they may incur together and so to raise their revenue and disburse it, as to secure the maximum social advantage from such operations of their financial policies. "If, therefore," observes Dalton, "public finance is to be treated as a branch of science, economic or political, and not merely as a

string of catchpenny maxims, one fundamental principle must lie at the root of it.”<sup>1</sup> This fundamental principle, says he, is the Principle of Maximum Social Advantage. “Most of the operations of public finance resolve themselves into a series of transfers of purchasing power. These transfers are made, by taxation or otherwise, from certain individuals to public authorities, and back again from these authorities, by way of public expenditure, to other individuals, some of whom, such as policemen or contractors, render services in return, while others, such as old age pensioners, do not.....As a result of these operations of public finance, changes take place in the amount and in the nature of the wealth which is produced, and in the distribution of that wealth among individuals and classes. Are these changes in their aggregate effects socially advantageous? If so, the operations are justified; if not, not.”<sup>2</sup> Hence, the test of sound public finance is the degree of social welfare or social advantage which it secures and that system is the best which secures the maximum social advantage from the operations which it conducts. Now, what should be the test of social welfare? Obviously, the chief conditions of an increase in the economic welfare of any community are improvements in production and improvements in distribution of what is produced, that is, a reduction in the inequality of incomes. With these objects in view, the public authorities have to examine, not only the character of public expenditure but also the nature and the methods of taxation which may be adopted. For, the same revenue may be raised by different methods, but one method of raising the revenue may secure greater welfare than another. Hence, the test of sound public finance lies “not in the amount of expenditure incurred by a government nor the amount of revenue raised by it in the discharge of its duties but in the methods of doing them and in the net benefit enjoyed by the people from the operation of state finances.”<sup>3</sup>

<sup>1</sup> Dalton—Op. Cit. pp. 9-10.

<sup>2</sup> Dalton—Op. Cit. p. 10.

<sup>3</sup> Fundamentals of Economics by Mehta and Others—2nd Ed. p. 680.

**Public Finance and Private Finance :** There are certain differences between public finance and private finance, although, broadly speaking, the problem in either case relates to the management of the revenue and expenditure. In the first place, in the case of an individual it is his income which determines his expenditure, whereas, in the case of a public authority, it is the expenditure which determines the amount of income it should have. In other words, while an individual adjusts his expenditure to his income, *i.e.*, keeps the expenditure within the limit of his income, a public authority adjusts its income to its expenditure, that is, increases its income to meet increased expenditure, if necessary.

That there is some truth in this view cannot be denied. But the difference, it should be noted, is only one of degree and not of kind and, therefore, should not be exaggerated. For, in certain circumstances, an individual adjusts his income to his expenditure and also a public authority adjusts its expenditure to its income. For example, an individual's expenditure may increase because he marries and so he may decide to increase his income by working harder, that is, he adjusts his income to his expenditure. Similarly, during a period of economic depression, when the revenue of a government falls, it may take recourse to retrenchment, etc., to curtail expenditure, that is, it endeavours to adjust its expenditure to its income.

Secondly, the ways by which the individual and the public authority seek to meet deficit, if any, in their incomes are also different. When, for instance, a public authority's expenditure exceeds its income in a year, it may meet the deficit in either of the following ways, *viz.*, (i) by borrowing from foreign countries, that is, by raising an external loan, or (ii) by borrowing from its own citizens, that is, by raising an internal loan, or, again, (iii) it may take recourse to printing notes. But, in the case of an individual, if his expenditure is more than his income, then he may meet the deficit either by earning more by working harder, or by borrowing from others, but he neither

can borrow from his ownself (as the state borrows from itself, i.e., from its own citizens) nor can he issue notes, that is, paper money.

Thirdly, theoretically, the public authority should so distribute its revenue among different items of expenditure as to secure equi-marginal returns from each, just as ordinarily, an individual distributes his income among different items of consumption in such a way as to obtain equi-marginal returns from each. But, for a public authority it is hardly possible to achieve this ideal in practice. A government owing to the existence of special interests, etc., may not succeed in distributing its expenditure according to the law of equi-marginal returns. Nevertheless, it is also true that in distributing his income between present and future expenditures, an individual does not make adequate provision for the future but a state makes better provision for the future than is done by the individual, since, it does not discount the future at such a high rate as is done by the individual.

Finally, it should be noted that although it is not desirable for an individual to run into debts by spending more than his income permits—it may not be so for a government. An unbalanced budget or a large public debt is not always harmful. For, increased expenditure by the state may increase production and employment and thus may lead to an increase in the national income and, therefore, ultimately may be beneficial. The need for a balance between the revenue and the expenditure is not so indispensable in the case of a public authority as it is in the case of an individual. The fiscal policy of any government is, therefore, to be judged by its effects on production, and distribution and increased expenditure may be justified when such expenditure leads to an increase in the aggregate national income and employment.

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## CHAPTER 38

### PUBLIC REVENUE

**Sources of Public Revenue :** The sources of public revenue have been classified by different writers in different ways. According to A. Smith, for instance, the two principal sources of public revenue are : (i) the revenue from sovereign's possessions, *e.g.*, land, etc., and (ii) the income from the possession of wealth by the people, that is, from taxation.

Seligman classifies the sources of public revenue in a different way. According to him, the sources of public revenue are the following : (i) Gratuitous, *e.g.*, voluntary gifts to the state ; (ii) Contractual, that is, income received as a result of contractual relations between the government and the citizens ; (iii) Compulsory source, that is, revenue obtained through the exercise of the sovereign power, *e.g.*, the penal power, the power of eminent domain (*i.e.*, the power of the state to take private property for public use without the owner's consent), the power of imposing taxes, etc.

A third way of classification of the sources of public receipts has been given by Taylor. The sources of public revenue, according to him, are as follows : (i) Grants and gifts, that is, voluntary gifts of donors without any expectation of direct benefit from such gifts. (ii) Administrative Revenues, *e.g.*, fees, licenses, fines, forfeitures, special assessments, etc., (iii) Commercial Revenues, *e.g.*, payments for postage or prices paid for commodities produced by the government or for the services rendered by it. (iv) Taxes.<sup>1</sup>

It thus appears that the sources of public revenue can be broadly divided into two categories, *viz.*, Tax and Non-tax sources. Let us examine the nature of these sources.

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<sup>1</sup> Lutz's Classification : (i) Commercial Revenues, (ii) Administrative and miscellaneous revenues, (iii) Taxation, (iv) Public Loans, (v) Subventions and grants, and (vi) Book-keeping revenues or transfers.

*Tax*: A tax is a *compulsory* charge levied by a public authority to defray the expenses incurred for conferring common benefits without any reference to direct *quid pro quo*, that is, without any reference to special benefits conferred against such payment. The distinctive features of a tax, therefore, are : (i) it is a compulsory payment and, (ii) the "absence of a direct *quid pro quo* between the tax payer and the public authority." <sup>1</sup>

*Non-tax Sources of Public Revenue* : The following are the main non-tax sources which yield revenue to the government :

(i) *Fees* : While a tax is a compulsory charge levied by the public authority to defray the expenses incurred in the interest of all, that is, common interest, a fee is a payment made by a person to the government for some specific service rendered by it. The amount of the fee, however, is not necessarily related to the cost of performing the service for which it is paid.

(ii) *Prices* : Prices refer to those revenues which are obtained by the government by sale of services and goods. These prices are not compulsory, that is, one need not pay if he does not avail himself of these goods and services.

(iii) *Special Assessments* : These are payments made by the owners of fixed properties to the government for the benefits they enjoy when the latter (that is, the government) undertakes any improvement of these properties in the interest of the public. When, for instance, a broad street or a park is opened in a locality the people living in the neighbourhood derive a special benefit because of the improvement and, hence, may be made to pay a special assessment. It is thus a "compulsory contribution, levied in proportion to the special benefits derived, to defray the cost of a specific improvement to property undertaken in the public interest." <sup>2</sup>

<sup>1</sup> Taussig—Principles, Vol. II, p. 483.

<sup>2</sup> Seligman—Essays in Taxation—p. 283.

A special assessment resembles a tax in that it is a compulsory payment. But, it is different from a tax since one who pays it receives a direct *quid pro quo* against such payment. A special assessment is thus a device by which the public authority may secure a part of the unearned increment in the value of fixed property which arises from specific improvements it undertakes.

(iv) *Duties* : Duties are those special charges which are levied on individuals with a view to discourage them from consuming certain goods and services whose unrestricted consumption is considered harmful to the society, *e.g.*, charges levied on consumption of alcohol, drugs, etc. Duties, like fees, are not compulsory and are levied in proportion to consumption, but fees like duties, are not charged in order to discourage consumption of goods and services because they are considered as harmful.

**Adam Smith's Canons of Taxation :** Adam Smith in his *Wealth of Nations* (1776) laid down four famous canons of taxation which even now are regarded as important administrative principles of taxation. These four canons of taxation are the following :

1. *The Principle of Ability or Equality* : "The subjects of every state ought to contribute towards the support of the Government as nearly as possible in proportion to their respective abilities ; that is, in proportion to the revenue which they respectively enjoy under the protection of the state."

2. *The Principle of Certainty* : "The tax which each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain."

3. *The Principle of Convenience* : "Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it."

4. *The Principle of Economy* : "Every tax ought to be so contrived as both to take out and keep out of the pockets



of the people as little as possible over and above what it brings into the public treasury."

The first of these canons, *viz.*, the canon of equality or ability suggests that every body should pay tax according to his ability to pay, or, in other words, taxes should be so levied that the real burden or the sacrifice involved should be equal for all. Should, then, the tax system be proportional or progressive? There seems to exist certain confusion as to what Smith had in his mind while he formulated this canon of taxation and there is difference of opinion in the matter. Secondly, how to measure an individual's ability to pay taxes? The principle, therefore, appears to be vague and ambiguous.

The principle of certainty implies that there should not be any doubt or uncertainty about the time, place and the amount of the tax one has to pay and the state should also be certain about the amount of revenue it may obtain from the taxes.

Similarly, the principle of convenience implies that care should be taken to see that no unnecessary hardship be inflicted on the tax-payers and that the time and the method of collecting the taxes are convenient to the tax-payers.

Finally, the principle of economy implies that the cost of collection of the taxes should be as small as possible. Economy in taxation calls for efficiency of administration as well as proper selection of taxes, that is, selection of those taxes only which have the least objectionable economic effects.

*Canons of Productivity and Elasticity:* Besides these four canons of Adam Smith we should discuss two more canons of taxation which have been formulated by later writers. These are the canon of productivity and the canon of elasticity.

The canon of productivity implies that the taxes should be so selected that they bring in sufficient revenue to the exchequer. Obviously, from the immediate and practical point of view the principle of productivity is of great importance to the financial authorities whose increasing expenditures in these days necessitate the raising of large revenues.

The principle of elasticity means that the taxes should be such as can be readily varied, that is, increased or decreased according to the revenue needs of the state as well as according to the changes in the economic conditions of the country. The tax system, that is to say, should be considered elastic when it can be expanded or contracted in a short time to increase or decrease the revenue according to the increase or decrease in the needs of the state.

**Principles of Taxation :** It has always been the endeavour of the statesmen to distribute the burden of a tax in the most judicious way. But what is the most judicious way in which the money burden of a tax can be distributed? Obviously, there is no unanimity of opinion in the matter and since the days of Adam Smith, various theories have been advocated to secure the equitable distribution of the tax burden. In the following paragraphs we have discussed some of these theories.

**Financial Theory :** A tax, according to this theory, is just a means for providing revenue to the state. It is a device for obtaining revenue for the public authority with least possible resistance from the tax-payers. Such a theory is thoroughly unacceptable since it neither takes into account the objects of the expenditure for which the revenue is raised, nor does it explain as to how the burden of the tax should be distributed.

**The Benefit Theory :** According to this theory, justice in taxation can be secured if the burden of taxation be distributed among the tax-payers in proportion to the benefit they derive from the activities of the state. That is, in other words, those who derive more benefit from such activities should pay larger amount of tax.

A tax, we have seen, is a compulsory contribution levied upon persons against which there is no direct *quid pro quo*. That is, the amount of the tax the individuals pay bears no relation to the benefit they enjoy. It is levied to meet the expenses of the state for conferring common benefits.

on all. Secondly, is it possible to measure the amount of benefit enjoyed by different individuals? How can we, for instance, measure the benefit we derive from the maintenance of police by the public authority? Thirdly, it is the poorer classes who derive the maximum benefit from the activities of the state. Are they, as the theory implies, therefore, to pay larger amount of tax? Obviously, thus, the benefit theory is inadequate and hardly can be accepted as a satisfactory theory of taxation. If, however, the "relation to the state of citizens *en masse* rather than the individual tax-payer be considered, there is a sense in which the aggregate of taxes represents payment for the aggregate of collective benefits rendered by the state." <sup>1</sup>

**The cost of Service Theory :** According to this theory, the costs which the state has to incur for rendering the services to the individuals should be borne by them. That is, in other words, taxes should be levied in order to meet the actual costs which the government incurs for rendering services to the individuals.

The theory is unsatisfactory for more than one reason. In the first place, we know that a tax is a payment against which there is no direct *quid pro quo*—it bears no relation to the cost the public authority incurs for rendering specific services. Secondly, is it possible to calculate the cost of rendering a certain service to particular individuals which the state renders to all in common? Certainly, no accurate calculation is possible. Thirdly, the theory implies that only those who can bear the cost will enjoy the benefits of state services and others who are unable to pay the cost shall be deprived of these services. Hence, such a theory of taxation is both unsatisfactory and undesirable. The government may charge fees to meet the costs of the services it performs but cannot levy taxes for meeting the costs it incurs for performing specific services to the individuals.

<sup>1</sup> ~~Lutz~~—Public Finance, p. 295.

**The 'Faculty' or the 'Ability' Theory :** Taxes, according to this theory, should be levied upon the individuals not in proportion to the benefits they receive but in proportion to their 'faculty' or 'ability' to pay taxes. 'Faculty' or 'ability' to pay is, of course, a better criterion than the benefit enjoyed by the tax-payers and hence, it appears just that the tax burden should be apportioned among the people in proportion to their ability to pay. But the measurement of *ability* or *faculty* presents difficulties. For, how can we measure the ability of an individual to pay taxes ?

Ability, according to some, can be measured by an individual's expenditure on consumption. Others suggest that the ownership of property is a true measure of an individual's ability to pay taxes. There are others still who hold that the true measure of a man's ability to pay taxes is his money income. Let us, therefore, examine each of these views and ascertain how far they are satisfactory.

In the first case, is it always true that a man's expenditure is a real measure of his ability to pay taxes ? Obviously not. For, a man's expenditure depends on various factors, *e.g.*, his family, number of the dependants he has to maintain, etc. Mr. X, for instance, may have to spend more than Mr. Y because he has a large number of dependants while Mr. Y has no dependant. We, can not, therefore, conclude that Mr. X's capacity to pay tax is more than that of Mr. Y. Expenditure, therefore, is not a satisfactory test of an individual's ability to pay taxes.

Similarly, the ownership of property also is not a satisfactory measure of an individual's ability to pay taxes. For example, Mr. X may have a large income but does not own any property, whereas Mr. Y may have some property but his income is very poor. If ownership of property be the test of a man's ability to pay taxes, then, Mr. X with a large money income will not have to pay tax since he does not own any property, whereas, Mr. Y has to pay tax although his money income is

poor. Hence, the ownership of property is also not a true measure of a man's ability to pay taxes. Besides, property also differs greatly in productiveness.

Neither the expenditure on consumption nor the ownership of property, therefore, can be accepted as a true measure of an individual's ability to pay taxes. Hence, in modern tax systems a man's ability to pay tax is measured by his money income. The larger the money income, that is to say, the greater is the capacity to pay tax. Hence, while apportioning the tax burden the authorities should impose greater burden on those with higher incomes and lesser burden on those with poor incomes.

But even money income, as a test of a man's ability to pay taxes is not without some defects. For, money income by itself does not give a proper idea of an individual's ability to bear the burden of the tax. For instance, the money income of two persons may be the same but one may have a large family and the other a small one. Obviously, their ability to bear the burden of the tax is not the same. It has, therefore, been suggested by Lord Stamp that in order to ascertain an individual's ability to pay taxes, besides his money income, we should take into consideration the following factors. Firstly, we have to take into consideration the element of time, that is, the income of which particular period should be taken into account. Secondly, it is possible that a person earns an income from the property he owns but at the same time he has to spend a part of his income for the improvement, necessary repairs, etc., of the property and hence his entire income should not be regarded as pure income. We have, therefore, to ascertain whether an income is a pure one, that is, without any wastage or return of capital or not. Thirdly, often incomes contain what is said to be a *precarious element*, that is, a man may earn, for instance, Rs. 200 but he may have to spend Rs. 40 or Rs. 50 in order to earn that income and hence, allowance must be made for this *element*. Finally, the ability of a man to pay tax depends upon such factors as the claims of his family, etc. Hence, we have to consider whether a man is free to spend his

entire income as he chooses to spend or if his freedom is restricted by domestic circumstances, that is, claims of his family, etc.

*The Principles of Equality of Sacrifice, Proportional Sacrifice and Least Aggregate Sacrifice.*

We have discussed the principle of ability from the objective point of view. But 'ability to pay' has also been interpreted from the subjective point of view, that is, from the point of view of the 'sacrifice' that the payment of taxes inflicts on the persons who pay the taxes. For, while paying the taxes, they have to forego a certain amount of satisfaction, that is, they have to make certain sacrifices. Three schemes, based on three different principles, viz., (i) equality of sacrifice, (ii) proportional sacrifice, and (iii) least aggregate sacrifice, have been suggested for the distribution of the tax burden from the standpoint of sacrifice. In brief, they are as follows :

(i) According to the principle of equal sacrifice, the money burden of taxation should be so distributed among the tax-payers that the sacrifice made by them, that is, the real burden borne by them, is equal. Theoretically, the principle is plausible but difficulty arises when we want to calculate the real burden of the tax-payers. For, how can we measure the 'sacrifice' or the subjective loss which a tax-payer undergoes or suffers while he pays the tax? Equal distribution of sacrifice among the tax-payers, thus, is hardly possible in practice.

(ii) The principle of proportional sacrifice states that the burden should bear the same ratio to all incomes. But a man's ability to pay tax increases more than the increase of his income and hence, from the standpoint of equity, progressive tax system is more satisfactory than the proportional tax system.

(iii) Taxes, according to the principle of minimum or least aggregate sacrifice, should be so arranged that the real burden borne by the tax-payers as a whole is minimum, that is, as small as possible. In other words, the aggregate sacrifice of the tax-payers, taken as a whole, should be least.

There is much to be said in favour of this principle. For, the maximum social welfare, which is the aim of public finance, can be attained only when the aggregate sacrifice of the tax-payers is minimum. But, according to this principle, while the poorer section of the people may be exempted and hence, may not have to pay any tax, the richer section with higher money incomes, has to bear the burden of the tax. The state, in order to raise revenues, will, therefore, go on taxing the tops of the highest incomes. But such a policy may affect the people's willingness to work and save adversely and, therefore, may impede the accumulation of capital. It is, therefore, necessary to see that the burden on the rich be not so heavy as to retard saving and ultimately to diminish the national dividend.

**Proportional, Progressive, Regressive and Degressive Taxes :** There is no difference of opinion on the point that the object of public finance is to secure the maximum social advantage. But to attain this object how the tax burden should be distributed among the people ? In any case, taxes should be related to the objective measure of ability to pay and, hence, we have to take one's money income as his test and vary the rate of the tax to attain our objective—the maximum social advantage. From the standpoint of the rate-structure, taxes may be of four types *viz.*, Proportional. Progressive, Regressive and Degressive. Let us, therefore, examine the nature of each of these types and find out how far equity in the distribution of the tax burden can be attained by them.

**Proportional Tax :** A tax is said to be proportional when the tax-payers have to contribute the same proportion of their incomes as taxes, that is, the rate at which the different incomes, large or small, are taxed is the same. • If, for instance, three persons, A, B, and C earn say, Rs. 100, Rs. 300, and Rs. 600, respectively, under a proportional tax system, assuming the rate of the tax to be 5 p.c., A will pay Rs. 5, B, Rs. 15 and C, Rs. 30, as tax, that is, whatever the amount of the income

of these persons, from each the same percentage of the income is taken away in taxes.

In the 19th century, the belief was that justice in taxation called for a proportional tax system. The idea which worked was that the distribution of wealth should be left undisturbed and the proportional tax system, under which the same percentage of income is taken from all as taxes does not disturb the distribution of wealth. Adam Smith also laid emphasis on proportional taxes when he said that the "subjects of every state ought to contribute towards the support of the Government as nearly as possible, in proportion to their respective abilities ; that is, in proportion to the revenue which they respectively enjoy under the protection of the state." But a proportional tax system is not wholly satisfactory. It does not, for instance, satisfy the principle of equity. According to the marginal utility theory, we know, the utility of money decreases as the income of a person increases. Hence, when a tax-payer's income increases, his ability to pay taxes increases more than proportionately. The need for equitable distribution of the tax burden among different income groups, therefore, calls for progressive taxation.

**Progressive Tax :** A tax is said to be progressive when the rate of the tax increases as the incomes of the tax-payers increase, that is, as their incomes increase the tax-payers have to contribute larger and larger proportion of their incomes as taxes.

In our illustration, if the tax be progressive instead of being proportional, then A will have to pay Rs. 5, i.e., at the rate of 5 p.c., B will have to pay, say, Rs. 21, that is, at the rate of 7 p.c., and C will have to pay, say, Rs. 66, i.e., at the rate of 11 p.c. The rate of tax, thus in this case increases as the income of the tax-payer rises. That is, the larger is his income, the larger is the proportion which he has to contribute as taxes.

**Justification of Progressive taxation :** Progressive taxation has been justified on several grounds. In the first place, it is held that since the marginal utility of money diminishes



with every increase in the income of the tax-payer, the principle of equality of sacrifice calls for progressive taxation, for, it is only by this method that larger and larger share of incomes can be taken away from the people with higher incomes and thus equality of sacrifice can be secured from the tax-payers with different incomes. Besides, it is said, that as a person's income increases his ability to pay taxes increases more than in proportion to the increase of his income and hence, in accordance with the ability theory, the rate of the tax should be higher for those who have larger incomes.

Secondly, progressive system of taxation, that is, taxing higher incomes at progressively higher rates, is also justified because it satisfies the principle of least aggregate sacrifice.

Thirdly, according to Hobson, an individual's income contains two elements, *viz.*, an element of cost and secondly, an element of *surplus*, *i.e.*, the amount which is not necessary to call forth the efforts of the income earner. Since, taxing the element of cost would destroy the income itself, it should be exempted; but the element of '*surplus*' can be taxed without any detrimental effect. According to Hobson, the larger incomes contain a large proportion of '*surplus*' and hence, taxing this surplus at a progressive rate is justified.

Fourthly, the incomes, specially of business firms and companies, it is said, should be taxed at a progressive rate, since *the larger the income, the greater is its power for the production of further income*, and hence, more can be taken away from it in taxes without any harmful effect.

Fifthly, progressive taxation has also been justified on the ground that it is an useful instrument in the hands of the government which can be used for reducing the glaring inequalities in the distribution of wealth in a capitalistic system. By taxing the rich at a higher rate and spending more on various social services and thus transferring the wealth from the rich to the poor through these expenditures, the state can go a long way to prevent the concentration of wealth in the hands of a few and to secure social justice.

Finally, it has now been acknowledged on all hands that the most urgent need for the modern government is to secure full employment. But a policy of full employment requires a high marginal propensity to consume and progressive taxation is helpful for increasing the community's propensity to consume since it secures a transfer of wealth from the rich whose propensity to consume is low to the poor having a very high propensity to consume.

These are no doubt valid reasons for the justification of progressive taxation. But we should also bear in mind the following points in this connection. In the first place, even if it is granted that with an increase in the level of income, the marginal utility of money diminishes—how can we calculate the rate at which this decline in the utility of money, as one's income increases, takes place and decide the rate of progression which would ensure equal sacrifice for all? Obviously, no such calculation is possible. It is true, as Pigou observes, that the law of diminishing utility states that the last £1 of an income of £1,000 carries less satisfaction than the last £1 of an income of £100. But, the law of diminishing utility does not assert that the last £10 of a £1,000 income yields less satisfaction than the last £1 of a £100 income and hence, according to him, the principle of progression cannot be justified on the basis of the law of diminishing utility. Secondly, is it always true that the large incomes contain large surplus elements? In the first place, the distinction between costs and surplus is a purely psychological one and we have no objective criteria to determine the rate of graduation and secondly, as has been pointed out by Lord Stamp, the accrual of surplus depends on factors not necessarily connected with the mere size of the income, *e.g.*, market conditions governing the yield of investment, etc. Hence, it is not proper to assume that large incomes necessarily contain large surplus elements.

It is, however, true that there is much room for improvement in the existing social order and although the theory of

'ability' or 'faculty' justifies proportional taxation,—progressive taxation can be defended in so far as it can be used as an instrument for improving the existing social order. Need for a re-distributive taxation policy is being increasingly felt by all for securing social justice and full employment and progressive taxation may prove greatly useful in helping the state to achieve these ideals.

**Regressive Tax :** A tax is said to be regressive when the rate of the tax diminishes as the tax-payer's income increases, *i.e.*, under regressive taxation the larger the income of a tax-payer, the smaller is the proportion which he has to contribute as tax. A regressive tax, thus, is just the reverse of a progressive tax.

**Degressive Tax :** A tax is said to be degressive when it increases with the increase in the income but the rate of increase of the tax decreases with every increase in the income.

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## CHAPTER 39

### PUBLIC REVENUE (Contd.)

**Taxable Capacity :** Any definition of the concept of taxable capacity of a community is sure to be incomplete. For, it is a purely relative concept and depends on various factors—economic and non-economic—many of which, again, vary from time to time and cannot be measured satisfactorily. Hence, no precise definition of the absolute taxable capacity of a community can be wholly satisfactory. Nevertheless, there have been various attempts to define the concept of taxable capacity. According to Silverman, for instance, by taxable capacity is meant, “the maximum amount that can be deducted from a community’s income consistent with the maintenance of that income in years to come.”<sup>1</sup> But how to measure this maximum which should be taken away without adversely affecting the people’s willingness to work and save and also without affecting their efficiency and standard of living? Moreover, it is not enough to maintain the income-producing power of a community at a certain level; rather, what is more important is to see that this power should increase. We have, therefore, not only to make allowances for depreciation, etc., but also to see that the national income gradually increases. How are we to determine the allowance to be made for ensuring the growth of capital? The definition, thus, is not very satisfactory.

The concept of taxable capacity has been defined by Findlay Shirras as the “total surplus of production over the minimum consumption required to produce that volume of production, the standard of living remaining unchanged.” But in this case, too, there are certain difficulties. For instance, what should be the minimum standard of living of the people and how it should be determined? Secondly, in times of crises like war, etc., it becomes a necessity to increase the people’s tax-

<sup>1</sup> Silverman—Taxation, p. 53.

able capacity even by reducing their standard of living. Finally, it is assumed that whatever surplus remains after allowance is made for the minimum standard of living can be taken away by the state. But, in practice, this is hardly possible.

It is, therefore, extremely difficult to make an accurate estimate of the taxable capacity of a community. Nevertheless, it is true that the taxable capacity of a community depends on certain factors. In brief, these factors are the following.

In the first place, the character of the tax system itself in no small measure influences the taxable capacity of a community. A large revenue can be raised without any prejudice to the productive capacity of the people, when greater reliance is placed on direct taxes such as, income tax, inheritance tax, etc. Secondly, the taxable capacity also depends on the manner in which the national income is distributed among the taxpayers. For example, when an individual has an income of, say, Rs. 25,000 his taxable capacity will be certainly greater than that of fifty men each earning, say, only Rs. 500. Hence, it follows, that the greater the inequality in the distribution of the national income, the greater is the taxable capacity of the people. Thirdly, the taxable capacity also depends on the character of the industrial organisation of the country and the standard of living of the people. Both affect the people's willingness to work and hence, their productive efficiency. Fourthly, the nature of the government expenditure is also an important factor which should be taken into consideration in our study of the taxable capacity of a community. A community's productive capacity and income and, therefore, taxable capacity will increase if the tax revenue be spent by the public authority on improvement of education, health, etc. The taxable capacity, on the other hand, will be reduced if the revenue be utilised to repay an external debt or, is spent on building competitive armaments, etc. There is, again, a close connection between the size of the population, the national income

and the taxable capacity. The taxable capacity, for instance, will increase when the national income increases at a rate faster than the increase in the number of population and hence, the *per capita* income of the people increases. Finally, it should be remembered that the taxable capacity, to a great extent, depends on the psychology of the people. For instance, a community's taxable capacity may be greater during the times of emergencies like war, etc., when the people may agree to make greater sacrifices than they would in normal times. (In normal times they would not agree to lower their standard of living).

**Burden of a tax :** The burden of a tax may be direct or indirect, and also there may be money burden or real burden of a tax. The direct money burden is measured by the sum which is paid in taxes. The indirect money burden is borne, for instance, by a seller of goods which are taxed for he has to pay the tax in the first instance, although, he realises the amount of the tax by raising the price of the commodity. But meanwhile he loses the interest which he would have earned on the sum paid in taxes.

The direct real burden of a tax is measured by the loss of economic welfare suffered by the tax-payer because of the imposition of the tax. And the indirect real burden similarly can be known from the indirect effect of the tax. The buyers, for instance, of a commodity will reduce their consumption of the same when the price will be raised as a result of the imposition of the tax. Such reduction of consumption will obviously mean a loss of welfare for them and this loss measures the indirect real burden of the tax.

### **The Shifting and the Incidence of Taxation.**

**The impact and the incidence of a tax :** In order to understand properly how different individuals are affected by different taxes, it is necessary to know the meaning and the significance of the terms 'impact' and 'incidence'. We may explain the meaning of the terms with the help of illustrations.

Take, for example, two commodities: tobacco and tea on which duties have been imposed. But the producer of tobacco, although pays the tax but by raising the price of tobacco by the amount of the tax succeeds in transferring the burden of the tax to the consumers of tobacco. That is, while the impact is on the producer, the incidence is on the consumers. But, in the case of tea, enhanced price may mean reduced consumption of tea and hence, the producer is unable to transfer the burden of the tax, at least fully, to the consumers. In this case, the producer bears, at least partly, the burden of the tax. Hence, it is possible that while the impact of a tax may be on one person, the incidence may be on another. For, the impact of a tax is on the person who first pays the amount of the tax, *i.e.*, from whom the tax is collected and the incidence of a tax is upon the person who bears the ultimate money burden of the tax, *i.e.*, who pays the tax eventually. And the process by which the burden of a tax is transferred from one individual to another, is known as 'shifting.' No tax, however, can be shifted continuously,—eventually, the burden has to be borne by one *i.e.*, eventually, the shifting must end in incidence.

The burden of a tax, thus, is shifted by raising the price of the commodity taxed. The incidence of a tax on a commodity, therefore, is determined by the relative elasticity of demand and of supply of the commodity. That is, other things being equal, the more elastic the demand for a commodity, the more will be the incidence of the tax upon the seller and the more elastic the supply (other things being equal) of a commodity, the more will be the incidence of the tax upon the buyers.

In our illustration, in the case of tobacco since the demand is assumed to be inelastic—the buyers will pay a higher price and hence, the incidence will be on the buyers but in the case of tea, since the demand is assumed to be elastic and so will fall when the price is raised, the burden cannot be shifted to the consumers by the seller and hence, the incidence will be on him, *i.e.*, the seller, at least partly.

Similarly, when the supply of a commodity is elastic, the producers will be able to raise the price of it by the amount of the tax, because the buyers will not be able to resist the rise in the price, since the producers may curtail the supply of the commodity if the demand falls because of a rise in price as a result of increased cost of production due to the tax. That is, the sellers always try to shift the incidence to the buyers by reducing the supply and the buyers, on the other hand, try to shift the incidence to the sellers by reducing the demand for the commodity and ultimately, the incidence of a tax on a commodity is determined by the relative elasticity of demand and of supply of the commodity. That is, the "relative ability of the two groups to achieve their aims, with the minimum loss to themselves, determines the result."<sup>1</sup>

Generally speaking, however, the sellers cannot shift the burden of the tax on luxuries to the buyers, because, the demand for these articles is elastic and will fall considerably if the prices are raised. But a tax on necessities, that is, the articles whose demand is inelastic can be shifted to the buyers who will consume them even if the prices are raised because of the tax.

Finally, it should also be noted that the time element is important in any study of the problem of incidence of taxation. In the short period, for instance, a producer may choose to bear the tax rather than raising the price of the commodity and alienate the customers and lose the market. But, in the long run, he may take the tax into calculation and adjust the supply to the demand in changed conditions. This will result in a readjustment of the incidence of the tax. That is, in other words, the supply of a commodity may be inelastic in the short run but it may be highly elastic in the long run and hence, the incidence may be on the seller or the producer in the short period but eventually, that is, in the long run, it may be shifted to the buyers.

<sup>1</sup> Dalton—Op. Cit. p. 54.



**Forward and Backward Shifting :** Shifting may be forward or backward. When the seller shifts the burden of the tax to the buyers by raising the price of the commodity then it is known as shifting forward. On the other hand, if the buyers succeed in not paying a price higher than the original price (*i.e.*, without the tax) and shift the burden to the seller or the producer, it will be a case of shifting backward. A retail seller shifts the tax forward when he can transfer the burden of the tax to the consumers and shifts the tax backward when he can pass it back to the wholesalers or the producers by compelling them to accept a lower price. Generally, however, the burden is shared between the producers, the merchants and the consumers. The producers, again, in certain cases, may transfer a part of it to their employees by reducing their rates of wages.

**The incidence of a tax under competition and under Monopoly :** In a competitive market several firms may produce a particular commodity with different unit-cost of production but they sell the product at the same price, which, however, tends to be equal to the unit-cost of production of the marginal firm. More efficient firms or the superior firms, therefore, earn profits. What happens if a new tax is imposed upon the product? The burden of the tax may be shifted to the buyers by raising the price of the product. But it cannot be shifted if higher price leads to a considerable fall in the demand for the product. Secondly, the more efficient or the superior firms, instead of raising the price of the product may bear the burden of the tax themselves and thus force the marginal firms out of the business.

If, however, the tax is imposed on the profits it will be difficult to shift the burden of the tax. While the marginal firms may escape the tax, for, they do not earn any profit, the superior firms can not raise the price, for, in that case they would lose the market and the marginal firms would gain.

A commodity, again, may be produced under conditions of constant cost, increasing cost *i.e.*, diminishing returns, and decreasing cost *i.e.*, increasing returns. In the first case, that is, when

it is produced under conditions of constant cost, since all the units of the commodity are produced at the same cost, in the case of an imposition of a tax on the commodity, the price will not be raised by more than the amount of the tax.

In the second case, *i.e.*, when the commodity is produced under conditions of diminishing returns, the imposition of a tax will raise the price but not by the full amount of the tax. To take an illustration : Suppose that 5,000 pens are produced at a cost of Rs. 10 per pen. Suppose, also, that a tax of rupee one per pen is imposed. This will lead to a rise in the price of pen by rupee one, that is, the price will be Rs. 11. But higher price will lead to a decline in the demand for the pen and in consequence, let us suppose, that only 4,000 pens will be sold now. Since the pens are produced under conditions of diminishing returns, let us suppose that the cost per pen declines to Rs. 9-8-0, when the output declines from 5,000 units to 4,000 units. So, when the tax is added, the price becomes Rs. 10-8-0, *i.e.*, it increases by an amount less than the amount of the tax.

In the third case, that is, when the commodity is produced under conditions of increasing returns, the price may rise by more than the amount of the tax. Suppose that the pens are produced under conditions of increasing returns *i.e.*, the cost is Rs. 10 when 5,000 units are produced and Rs. 10-8-0 when 4,000 units are produced. If the demand falls from 5,000 to 4,000 pens as a result of higher price due to the imposition of the tax (*i.e.*, Rs. 10 + Re. 1 = Rs. 11), the cost per pen (excluding the tax) will be Rs. 10-8-0. And the price of the pen, therefore, when the amount of the tax, that is, Re. 1 is added, will be, Rs. 11-8-0.

It is, therefore, suggested that while taxes should be imposed on commodities produced under conditions of diminishing returns, bounties should be given to those commodities which are produced under conditions of increasing returns.

**The incidence of a tax on a monopolist :** A monopolist, in order to earn the maximum profit, will expand his output until his marginal revenue is equal to his marginal cost. And

since he has the control over the supply of the product, he is in a better position to adjust the price to the changes in the demand in order to earn the maximum profit.

If the tax is not heavy, the monopolist may bear the burden of it without raising the price of the product. In the case of a heavy tax, however, his endeavour will be to shift the burden, wholly or partly, to the consumers by raising the price of the product. A higher price may lead to a decline in the demand for the product and so in the volume of sales and thus to an increase in the unit-cost of production but since a monopolist has no fear of rivals, the tax will be shifted, at least, partly, on to the consumers. If the tax is proportional to the output, he would reduce the output and raise the price.

Now, the tax may be imposed as a lumpsum on the profits of the monopolist or it may be a proportional one on the monopoly profits. In the first case, the monopolist will not alter the price for the simple reason that the price which earned maximum revenue for him when the tax was not levied will also bring him maximum revenue now, *i.e.*, after the payment of the tax. So, the burden of the tax will not be shifted to the consumers. Similarly, in the second case, also, he will have no inducement to alter the price and the burden will be borne by him. When, however, the tax is levied on the output, the monopolist may shift a part of the burden to the consumers by raising the price of the commodity, but his ability to do so will depend upon the elasticity of demand for the commodity. Unless, therefore, we assume that the supply is absolutely inelastic or the demand is infinitely elastic, the incidence, generally speaking, will be distributed between the monopolist and the consumers.

**Direct and Indirect taxes :** A tax is a direct one, the impact and the incidence of which are on the same person, *i.e.*, the person from whom the tax is collected is unable to shift the burden of the tax to others and so bears the money burden himself. An income tax is an example of direct tax. The person on whom the tax is imposed has to pay the tax and cannot

shift the burden to others. When, however, the impact and the incidence of a tax are on different persons, the tax is said to be an indirect one. Taxes on commodities are generally indirect taxes. For, although the producer or the seller pays the amount of the tax to the government in the first instance, eventually the burden of it is shifted on to the buyers or the consumers by raising the price of the commodity.

**Direct taxes : Advantages and Disadvantages :** There are certain advantages of a direct tax. In the first place, a direct tax is equitable. For, it can be so graduated that heavier burden may be imposed on those whose incomes are higher. It thus satisfies the principle of ability to pay. Secondly, it also satisfies the canon of certainty. For, the tax-payers know definitely the amount they have to pay and also the exchequer may make more or less an accurate estimate of the yield and, hence, may adjust his finances accordingly. Thirdly, the cost of collection of direct taxes is considerably low and hence the canon of economy is also satisfied. Fourthly, direct taxes are highly elastic. The yield from such taxes may be increased or decreased by changing the rates of the taxes. These taxes are also productive, since the yield from such taxes increases automatically with the increase in the national income or in population. Finally, the direct taxes are socially advantageous in the sense that they arouse civic consciousness of the people who are likely to take more interest in public affairs when are made to pay direct taxes.

There are, however, certain disadvantages of a direct tax. For instance, it is greatly inconvenient to the tax-payers since they have to pay in large amounts, that is, in lumpsum. Secondly, there is a great possibility of evasion. By dishonest means, *e.g.*, submission of false and fraudulent returns, etc., payment of taxes may be evaded. Hence, it is said that a direct tax is a tax on honesty. Finally, it is extremely difficult for the taxing authority to find out a just basis of assessment for all classes of people whose incomes greatly differ. Such a tax, therefore, has to be arbitrary.

**Indirect taxes : Advantages and Disadvantages :** The advantages of indirect taxes are the following : In the first place, evasion is not possible—everybody has to pay the tax. The individuals with low incomes, who do not pay any direct tax, also cannot avoid indirect taxes. Secondly, the indirect taxes are not paid in lumpsums (as in the case of direct taxes) and hence, are convenient from the standpoint of the taxpayers who do not feel the burden so much since the taxes are paid in dribblets. Thirdly, when levied on articles whose demand is inelastic, the indirect taxes are highly productive. Fourthly, indirect taxes, when imposed on luxuries, may compel the rich to contribute more and when imposed on such articles as intoxicants, etc., will check their consumption and thus will contribute to the social welfare.

The disadvantages of indirect taxes are the following : An indirect tax affects the poor more than it does the rich, and hence, it is inequitable. Direct taxes can be graduated but indirect taxes on commodities are levied at a flat rate and are paid by all income groups and hence, are regressive in character. Secondly, the cost of collection of such taxes is fairly heavy. Careful supervision is necessary to prevent evasion of payment of taxes. Hence, indirect taxes are uneconomical. Besides, the price of the taxed commodity may often rise by more than the amount of the tax, since, the producer or the seller, from whom the tax is collected in a lumpsum, not only will try to shift on to the buyers the amount of the tax but also will try to shift on to them the amount he loses in interest on the sum he pays in taxes *i.e.*, the amount he could earn as interest on the sum paid in taxation during the period between the payment of the tax and the sale of the goods. Thirdly, the yield from such taxes is uncertain. Finally, consumption, excepting of those articles which are absolutely necessary, may fall because of the higher prices due to the imposition of taxes and thus the revenue may also shrink.

**Single Versus Multiple tax system :** Earlier, the idea of a single tax system, that is, the imposition of a tax on some single

item, *e.g.*, on the economic rent of land or on income, etc., was popular for mainly two reasons, *viz.*, firstly, such a system, it was held, would mean an inexpensive or economical system and secondly, taxing authorities could be sure about the incidence of the tax. The Physiocrats, for example, believed that ultimately all the burden of taxation fell on the economic rent of land and hence, advocated for a single tax on the economic rent of land. Henry George also pleaded for a single tax on land with the same idea. Every one, according to him, could make a living if land was shorn of its economic rent by full taxation. Besides, such a tax, it was believed, would not in any way check industries.

This theory, however, is not accepted by the modern economists for its certain obvious defects. In the first place, it is based on a wrong theory of incidence and also there is the possibility of inequitable distribution of the burden of taxation. For, under such a system, those who do not invest their incomes in land would be exempted. A rich man, for instance, if he owns no land, would not pay any tax whereas a poor man possessing some land or a house would have to pay tax. This is certainly inequitable. Secondly, a modern government needs a very large revenue for its manifold activities and a single tax system certainly cannot yield adequate revenue.

The other proposal for a single tax is that of taxing the incomes only. But this is also an unsatisfactory proposal. For, it is not possible to raise the large revenue needed by a modern government by such a single tax system. Secondly, the cost of collection of the tax, when it is assessed on small incomes, would be very large and eventually, it may prove to be uneconomical. Thirdly, it would discourage savings and finally, under such a system, the inheritors of wealth would be exempted since no special contribution can be secured from them, although, equity demands that they should be made to pay. Hence, it leaves out some highly desirable sources of taxation.

Neither, therefore, a single tax on the economic rent of land nor on income is satisfactory. Not only it is not possible to raise adequate revenue for the government by such a single tax system, but it is defective for other reasons also. For example, it may imply inequitable distribution of the incidence as between individuals. Secondly, by a single tax system, it is not possible to reach different taxable capacities and often some most desirable sources may remain untaxed. Finally, evasion would be easier under a single tax system than it is under a multiple tax system. Modern governments, therefore, no longer accept the idea of a single tax system. Instead, the idea of a multiple tax system has gained favour everywhere. The reasons are the following :

(i) By a multiple tax system the anomalies which are likely under a single tax system may be corrected and a more equitable distribution of the burden of the tax may be ensured.

(ii) Evasion becomes difficult under a multiple tax system which provides checks and counter-checks and hence, every source can be tapped.

(iii) A large revenue to meet the needs of a modern government can be raised by a multiple tax system and not by a single tax system.

It is, however, true that too great a multiplicity may create difficulties and may often tend to be uneconomical and so may not be desirable. Besides, such a multiplicity of taxes may often be prejudicial to the healthy growth of industry. Neither a single tax system nor a multiple tax system, therefore, is desirable and hence has been suggested the idea that a compromise should be made and a system which has been called the 'plural' taxation system, should be adopted. "It is best to rely," observes Dalton, "on a few substantial taxes for the bulk of the tax revenue. In so far as it is desired to tax the rich, income and inheritance taxes are the best means ; in so far as it is desired to tax the poor, taxes on a few commo-

dities of wide consumption, preferably commodities not necessary to health and efficiency.”<sup>1</sup>

**The Effects of Taxation :** Every tax necessarily produces certain effects on the economic conditions of the country and the usual way of studying the effects of a tax is by examining the effects it produces on production, that is, on people's willingness to work and save, on their ability to work and save and on the distribution of the country's economic resources between different employments and localities.

Any tax which adversely affects the people's willingness to work and discourages savings and investment will necessarily adversely affect production. An income tax on poorer members of the community or a tax on necessary articles will reduce people's efficiency and, therefore, their ability to work and save and hence will be harmful. Again, heavy income tax on a graduated scale on large incomes also produces harmful effects in so far as it affects adversely the incentive to invest. This may result in a dearth of supply of capital. Ultimately, however, one's desire to work more or less depends upon his elasticity of demand for income in terms of the efforts and sacrifices he makes in order to earn his income. Generally, people are accustomed to a certain standard of living and their willingness to work and save will increase or decrease as a result of the tax, according as their demand for income is inelastic or elastic.

The effects of death duty on people's desire to work and save, it is said, are not so injurious as they are in the case of an income tax. For, in the first place, the death duty is assessed on the big inheritances and hence, its effects on the savings of people with small incomes is negligible. Secondly, the death duty is not to be paid by the saver himself but by the legatee and it is possible that such a duty may even induce him to work harder in order to make good the loss arising from the payment of the duty.

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<sup>1</sup> Dalton—Ibid, p. 46.



*Tax on Unearned Increments:* Imposition of a tax on the unearned increments in land values, which are just like wind-falls, is justified on more than one ground, viz., in the first place, the unexpected nature of such increments in land values, it is said, justifies the imposition of a tax on them; secondly, a tax on such increments is also justified because the owners of land gain considerably when the value of land rises because of the progress of the society that is, without any effort on their part. It is true that there is much truth in this statement. But it should also be remembered that an increase in the value of land may also be due, to a certain extent, to the improvements made by the owner himself and it is a difficult, rather, an impossible task to separate the earned from the unearned increment for purposes of assessment. Again, supposing there is a decrease in the value of land. Should the government, in this case, pay compensation? These are the practical difficulties which can not be avoided when the state desires to take away the whole of the unearned increment in the land values. But, that it is socially justifiable to take a large share of the unearned increment in taxes cannot be denied.

A tax, again, affects production by affecting the distribution of the country's economic resources between different employments and localities. Care, therefore, should be taken to see that only such taxes are levied as will cause diversions of economic resources to socially desirable directions. A tax on a monopolist, for instance, may induce him to expand his output and lower his selling price and hence, may cause a beneficial diversion. Similarly, a tax on, say, intoxicants by discouraging their consumption and, therefore, their production, may cause a diversion of the resources which will increase the production of more beneficial commodities.

Diversion of economic resources from one locality to another as a result of heavy taxation may sometimes have injurious effects on the productive capacity of the particular areas and so should be avoided.

Finally, a "less unequal distribution," as observes Dalton, "is no less desirable than an increased production of wealth." Hence, a close examination of this aspect is equally necessary to judge the effects of any tax system. And while examining a tax system, not only should we examine the effects it produces on production of wealth but also we should consider the effects of corresponding expenditures incurred by the public authorities from the proceeds of the taxes. Reduction of inequalities of incomes and securing the maximum social welfare are the objectives of the public authorities and to the extent they succeed in achieving these objectives by their financial policy they are justified.

**Characteristics of a Good Tax System :** There are thus certain characteristics which a good tax system should necessarily possess. In brief, they are the following. In the first place, a good tax system should provide the state with adequate revenue. Secondly, the tax system should satisfy all the canons of taxation laid down by Adam Smith. Thirdly, the tax system should be elastic, that is, it should be capable of yielding larger revenue in times of emergency without causing undue dislocation in the economic organisation of the country. It may be pointed out that to achieve the desired result it is necessary to examine carefully the incidence of individual taxes to avoid unnecessary money burden on any section of the community.

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## CHAPTER 40

### PUBLIC EXPENDITURE

**Importance of Public Expenditure :** We have already observed, that the 19th century bias for restricting the state activities only within the political sphere no longer exists. A striking feature of the present century is the enormous needs of revenue of the modern governments. This has been so because of the recognition of the fact that defence and maintenance of internal order, though important, are not the only responsibilities of the state. No less important is its duty to improve the social and economic conditions of the people. The primary objectives of public finance to-day, therefore, are to promote a higher standard of living and to secure the maximum social welfare. The duty of the state, it is now being increasingly felt, is "to ensure that every citizen can enjoy the primary necessities of life—sufficient and correct food, adequate shelter, and health and education services commensurate with his needs. It is now widely held that the State should ensure this minimum by itself buying or producing and distributing the means of satisfying these primary wants, wherever it is apparent that the field is not being adequately covered by private enterprise."<sup>1</sup> And it is also its duty, "to secure the maximum level of economic activity and of social welfare which the resources of the economy permit."<sup>2</sup> Hence, the importance of a careful study of the nature of public expenditure. It is the expenditure and its nature and not the income which is the governing factor in the public finance of the modern governments.

**Classification of Public Expenditure :** Public Expenditure has been classified by different economists in different ways. Below we have discussed briefly some of these classifications.

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<sup>1</sup> Hicks—Public Finance, p. 13.

<sup>2</sup> Ibid, p. 13.

(i) Public expenditure often is classified as *ordinary* and *extra-ordinary*. The former refers to the recurring expenditure incurred in connection with the maintenance of essential public services, *e.g.*, police, administration of justice, or expenditure on education, etc., and the latter refers to the expenditure which has no such tendency to recur but which is incurred in emergencies or on special occasions. *e.g.*, war, famine, etc.

There is, however, not always unanimity of opinion as to what exactly is meant by '*extra-ordinary*' and what is meant by '*ordinary*' expenditure. Secondly, when a sufficiently long period of time is taken into consideration, the *extra-ordinary* expenditure will tend to be '*ordinary*'. Hence, such classification of public expenditure is not satisfactory.

(ii) Prof. C. C. Plehn divides public expenditure into four classes on the basis of benefit, *viz.*, (i) the expenditure which confers benefit on all, *e.g.*, defence ; (ii) the expenditure which though confers a special benefit on certain classes of people yet should be regarded as conferring a common benefit, *e.g.*, old age pensions, poor relief, etc. ; (iii) the expenditure which confers a special benefit on some people and a common benefit on the community as a whole, *e.g.*, administration of justice ; and (iv) the expenditure which confers a special benefit only on a certain section of the community, *e.g.*, expenditure incurred to give bounty to an industry.

Such a classification is also unsatisfactory since the distinction between different classes of benefit cannot be clear-cut and it is likely, as Prof. Plehn himself admits, that there will be constant shift from one class to another with evolution.

(iii) Public expenditure has also been classified into *productive* and *unproductive* expenditure. For example, the expenditure incurred in connection with the construction of railways which will yield a surplus is regarded as *productive* and the expenditure which yields no surplus is regarded as *unproductive*. But the idea of making such a distinction is incompatible

with the idea of a welfare state where public expenditure should be judged not from the standpoint of the surplus it yields but from the standpoint of welfare it secures to the society as a whole.

(iv) Often, again, a distinction is made between *operating expenditure*, i.e., which does not lead to an increase in the community's aggregate net assets and *capital expenditure* which results in an increase in the aggregate net assets of the community.

(v) **Pigou's Classification :** Prof. Pigou makes a distinction between *non-transfer expenditure*, e.g., expenditure on army, navy, judiciary, etc., which is exhaustive (not necessarily wasteful or injurious), that is, which results in an using up of productive resources in government service and hence, restricts the use of those resources by the community in private services and *transfer expenditure*, e.g., the expenditure incurred for payment of interest on government debt, old age pensions, etc., which only causes a transfer of resources from one section of the community to another and does not involve any using up of productive resources of the community.

(iv) **Dalton's Classification :** Dr. Dalton divides public expenditure into two classes, viz., (i) the expenditure which is intended to preserve the social life of the community against internal or external attack and (ii) the expenditure which is intended to improve the "quality of the social life." Dalton also has drawn a distinction between *grants* and *purchase prices* and has compared the distinction between grants and purchase prices with that between transfer and real expenditures. If an individual receives public money or money's worth without contributing anything then the state makes him a grant, e.g., poor relief, free education, etc. On the other hand, if the individual receives payment in return for the services he renders then the state makes a purchase from him e.g., payment made by the state to any of its employees. All grants of money represent transfer expenditure and, in general, purchase prices represent real expenditure.

**Effects of Public Expenditure :** Enormous increase in the volume of the public expenditure of a modern government indicates the considerable extension of the sphere of its activities and the influence it exerts on the economic system of the country as a whole, that is, both on the production and distribution of the national income. The state, to-day, exercises no small influence on the economic system either as an employer or as a producer of goods and services. Public expenditure which involves transfer of purchasing power from one section of the community to others also in no small measure influences the economic system of a country, for, such expenditure obviously affects the distribution of income. We should, therefore, study the effects of public expenditure on production and on distribution.

**Effects of Public Expenditure on Production:** All those expenditures which increase the productive efficiency and, therefore, the ability of the people to work and save, *e.g.*, expenditures on education, etc., will surely increase the volume of the national income of the country. It is, however, necessary to note that conditional grants, *e.g.*, grants in case of sickness, etc., are not likely to have any adverse effect on people's willingness and ability to work and save, whereas, such forms of public expenditure as unconditional grants to those who are unemployed, etc., may have adverse effect on people's willingness to work and save.

Public expenditure, again, may go a long way to increase the level of employment and the volume of output of the country, specially so, during the periods of depression when investment and, therefore, employment in private sector decrease. The government, during such periods of depression, may adopt a Public Works Programme and increase the volumes of employment and production of the country and thus may increase the national income.

Just as some expenditures increase the productive efficiency of the people, so there are others which may increase the peo-

ple's propensity, (specially of the poor), to consume, by conferring greater benefits on them. Increased propensity to consume will mean increase in employment and production and, therefore, increase in the volume of national income also. Some public expenditures, again, add to the aggregate of wealth of the community directly, *e.g.*, government enterprises, irrigation, and re-forestation projects etc. Similarly, as Dalton has pointed out, by bringing about diversion of economic resources between different employments and localities public expenditure influences production. Diversions of economic resources which result when grants are given by the central government to local authorities for development of economically under-developed areas obviously are beneficial. ..

Public expenditure will be considered as unproductive if, for instance, the government enterprises fail to conform to the standards of private enterprises and are unable to supply goods or services of the same quality at the same prices or at lower prices than the private enterprises. Similarly, such expenditure as may be incurred on competitive armaments, etc., which does not contribute to human welfare and "would be largely unnecessary, if only men were a little wiser, or more imaginative, or more honest than they are"<sup>1</sup> should be regarded as unproductive.

**Effects of Public Expenditure on Distribution :** Existing inequality of incomes is one of the main causes of the social unrest of our age and public expenditure, by influencing the distribution of national income, can go a long way to reduce this inequality of incomes. That system of public expenditure is most beneficial which ensures maximum reduction of this inequality and thus contributes largely to the economic welfare of the people.

Reduction of inequality of incomes may be achieved by direct transfer of wealth from the rich to the poor *e.g.*, by making provision of old age pensions for the poor, etc., or, again, pub-

<sup>1</sup> Dalton—Op. Cit. p. 215.

lic expenditure may reduce the inequality of incomes by adjusting individual incomes to family needs during different periods. Certain expenditures, again, confer benefit on all members of a community, *e.g.*, provision of good roads, free water supply etc. These expenditures no doubt influence distribution and largely increase the welfare of the people as a whole but it is hardly possible to trace the effects of such expenditures on the different classes of people. •

We, therefore, conclude by observing that that system of public expenditure is best which increases the people's productive efficiency and stimulates production by securing the most desirable diversions of economic resources of the country and also ensures the maximum possible reduction of inequality of incomes.

In other words, the aim should be maximisation of the social advantages which can be achieved when public expenditure in different directions is pushed in such a way as to yield equal marginal utility. It may not be out of place to refer in this connection to the four canons of public expenditure which have been laid down by Prof. F. Shirras. These are the following: (i) *Canon of Benefit*: i.e., the aim of public expenditure should be to secure maximum benefit from such expenditure (ii) *Canon of Economy*: i.e., the resources should be used economically (iii) *Canon of Sanction*: i.e., there should be check on unwise and extravagant or uneconomic expenditure. A public authority should obtain sanction from a higher authority to spend for expenses beyond a certain limit, (iv) *Canon of Surplus*: i.e., care should be taken to see that deficits do not occur. The public authority, in other words, should endeavour to avoid deficits in expenditure. Borrowing, however, is permissible for useful purposes and it should be seen that the public authority obtains sufficient revenue to pay interest and to build up a Sinking Fund to repay the principal amount of the loan. Deficits, however, may not be avoided in emergencies.



## CHAPTER 41

### PUBLIC DEBT

**Public and Private Debt :** Governments these days can raise large sums of money by borrowing and hence public debt constitutes an important source of revenue for the governments of modern countries just as repayment of the principal or payment of interest on loans constitutes a part of public expenditure.

A public authority borrows when its expenditures are more than its revenue receipts just as an individual borrows when his income falls short of his expenditure. Nevertheless, there are certain differences between public credit, that is, loan raised by a public authority and private credit. These are, in brief, the following.

In the first place, the state not only has sovereign power and can, therefore, compel its subjects to lend, it also has a perpetual life and hence, it can raise perpetual debts. A state may even borrow on the expressed condition of non-repayment of the amount borrowed. These are obvious reasons which distinguish a public debt from a private debt. Secondly, while borrowing, a state does and an individual does not, consider the effect of such borrowing on the community as a whole. Borrowing by an individual as such hardly does have any effect on the economy of the country but the borrowing by a public authority affects the country's economy and welfare in no small measure. Thirdly, a public authority can raise an internal loan, that is, can borrow from its own subjects, or can raise an external loan, *i.e.*, can borrow from those who are not its subjects. Or, again, it may issue notes. An individual, on the other hand, can neither raise an internal loan, *i.e.*, cannot borrow from himself, nor, can he issue notes. Fourthly, the repayment of an internal loan by the state only involves a transfer of funds within the society and when the state repays a debt by taxing

the people obviously a portion of the amount needed for repayment of the debt may come from those people to whom payment will be made, that is, those who pay taxes might have given loans to the state. By repayment, therefore, the public creditors gain only to the extent to which they are not taxed for such repayment purpose. Finally, because of the higher credit of the public authority, the rate of interest on public loans is generally lower than the rate of interest on private loans. And from the standpoint of the creditors, such investments mean stable investments and also, if they so desire, they may realise the loans at any moment with greater facility than they can in the case of private loans.

**When to borrow ? The Purposes of Public Borrowing :**  
We have seen that there are various sources of revenue of a modern government. The function of public credit is to serve as a supplement to the other sources of revenue. Nevertheless, public debts increase the obligations of the public authority. It is, therefore, important to know under which circumstances it is proper for the state to borrow. Obviously, practical expediency will largely govern the decision of a public authority in these matters. But certain broad principles may be laid down. These are, in brief, as follows :

Firstly, normal expenditures or such expenditures which regularly recur should be met from taxation. The public authority may take recourse to borrowing to meet any deficit resulting from an unforeseen emergency which calls for immediate and prompt action. Borrowing may be justified also because tax proceeds may not be sufficient for the huge expenditures which may be necessary in certain cases of emergencies, *e.g.*, conducting a war, etc.

Secondly, loans may be justified for meeting such non-recurring expenditures as may be incurred for financing the projects or schemes for the development of the economic resources of the country, the commercial enterprises of the state, etc. Such expenditures are in the nature of capital expenditures and the benefits of such expenditures are spread over a time. It is,

therefore, reasonable that the cost of these expenditures should also be distributed over a time. There are, again, some capital expenditures *e.g.*, expenditures incurred, say, for constructing railways, etc., which will yield revenue from which the interest charges may be met, while there are others, *e.g.*, expenditures incurred for the construction of school buildings, etc., which are not productive of revenues in the sense in which the railways are. Nevertheless, such expenditures result in substantial benefit which will be enjoyed by the community in future years. Hence, loans, the burden of which spreads over a time, may be raised to meet the cost of such expenditures.

**Financing of a War : Loans Versus Taxes :** The bulk of the public debts of the modern governments are the results of war. For, no longer it is possible to conduct a modern war, which means huge expenditure, by past savings of the state. The question, therefore, is : should a war be financed by raising loans or by imposition of taxes ? Ricardo and some other classical economists were of opinion that war should be financed mainly by taxation. The arguments usually put forward in support of this view are, firstly, that taxation, specially when the rich are made to pay on a progressive scale, would check unnecessary consumption and so unnecessary expenditure would be avoided. Secondly, while loan may result in inflation of credit and prices, taxation may avoid the dangers of inflation of credit and prices. Finally, this method has another advantage, *viz.*, it would avoid the burden of post-war taxation to pay the debt charges.

These are no doubt valid arguments. But it should be remembered that the huge sum which is required for financing a modern war can not be raised by taxation alone. Tax revenue will be inadequate and also there is a limit beyond which imposition of taxes to raise revenue may have serious adverse effects on the economic system of the country as a whole. Besides, raising of loans, of course, may lead to inflation, but inflation, we know, stimulates productive activities and increases

employment whereas heavy taxation may kill the incentive to productive activities. We may, therefore, conclude that neither taxation nor borrowing should be exclusively adopted as a method of financing a war but a combination of both the methods would be the most desirable way of financing a modern war. Borrowing and taxation, it should be remembered, are complementary to each other and should not be regarded as substitutes for each other. A combination of the two will yield the maximum advantage to the government.

**Classification of Public Debts :** Public debts have been classified in various ways. For instance, they have been classified according to the length of the time for which they are raised, or, again, according to the purpose for which they are raised, etc. In the following paragraphs we have discussed briefly some of these classifications of public debts.

(i) *Forced Loan and Voluntary Loan :* In an emergency the government may take recourse to a forced loan (*e.g.*, it may seize all bank deposits as an alternative to confiscation) the terms of and the rate of interest on which are determined by the government itself. A *forced loan*, therefore, cannot be said to be a public loan in the true sense and modern governments do not usually take recourse to such loans.

In the case of a *voluntary loan* the creditors are free to invest or not to invest and, thus, there is no element of compulsion or force.

(ii) Mrs. U. Hicks<sup>1</sup> has distinguished between three types of public debt *viz.*, (i) *Deadweight debt* (ii) *Passive debt* and (iii) *Active debt*. These different types of debt are distinguished in the following way :

(i) *Deadweight debt* refers to that debt which arises from expenditures, which in no way add to the productive powers of the community *e.g.*, war expenditures ; (ii) *Passive public debt* arises from expenditures which neither yield any money in-

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<sup>1</sup> Mrs. U. K. Hicks—The Finance of British Government—1920-36.

come nor increase the productive power of the community, but yield utilities and enjoyment to the community *e.g.*, debt incurred from expenditures on public parks, museums, etc.

(iii) An *Active debt* refers to that debt which arises in consequence of expenditures which yield money income or increase the country's productive power. Such a debt is incurred, that is to say, for construction of income-yielding projects or for being spent in such ways as would increase the productive efficiency of the people as a whole.

(iii) *Productive and Unproductive debt* : A debt is said to be *productive* when it is fully covered by assets and is so invested as to yield a money income or increase the productive power of the community. An *Unproductive debt* refers to a debt which is neither covered by assets nor is expected to yield any money income or increase the productive efficiency of the people.

Such loans as may be raised for, say, prosecution of a war, etc., are said to be deadweight debts. These debts bring no return nor are covered by assets and while the interest charges on productive debt are paid out of the income obtained from the assets, the interest on such deadweight debts is paid out of the general revenues of the state.

In practice, however, it is difficult to distinguish between *productive* and *unproductive* debts. For, no debt can be said to be totally unproductive.

(iv) *Internal and External Debt* : Loans are *internal* or *external* according as they are subscribed by the nationals or the institutions within the country, or, they are subscribed by the foreigners or the institutions outside the country. In the first case, that is, in the case of an *internal loan*, the payment of interest or repayment of the principal involves only a transfer of resources within the country, *i.e.*, a distribution of the national income and does not, therefore, involve any exhaustion of the country's resources. But in the second case, *i.e.*, in the case of an *external loan*, the payment of interest as well as repayment

of the principal involve transfers of the country's wealth to the foreigners and, hence, to the extent such transfers take place, the country's resources are exhausted.

(v) *Redeemable and Irredeemable Loans*: Loans, again, may be *redeemable*, that is, when the government promises to pay off the loans at some future date, or *irredeemable*, i.e., when no such promise is made by the government, although, the interest charges on such loans are paid.

(vi) *Funded and Unfunded or Floating Debts*: Public debts are also classified in accordance with the length of the periods of the loans. The debts which are repayable after a long period are called *funded debts* and those debts which are repayable within a short period, usually, within a year, are called *unfunded* or *floating debts*. Such *unfunded debts* are incurred in order to meet temporary deficits in the budgets. Treasury bills, Ways and Means advances from the Central Bank to the government, are examples of unfunded debts, for, they are repayable within a very short period, usually three months in case of Treasury bills and twelve months in case of Ways and Means advances.

These terms, however, are often used in different senses. For instance, in England the *funded debts* refer to those loans the interest on which the government is obliged to pay but the government undertakes no obligation to repay the principal at any time. *Funded debts* thus mean permanent loans, e.g., British 'Consols'. *Unfunded debts*, on the other hand, refer to those debts whose principal will be repaid on some fixed date.

A government often borrows upon *annuities* which, again, may be terminable or perpetual. In the first case, the government agrees to pay the interest annually for a certain number of years. In the case of ordinary terminable annuities, the annual payments consist of interest and a part of the principal. In the case of life or perpetual annuity, the government agrees to pay a certain sum of money annually towards the repayment of the loan so long as the annuitant is alive but when he dies the debt is considered as discharged.

**The Burden of Public Debt :** In order to estimate the burden of public debt several factors have to be taken into consideration, *e.g.*, the extent of such a debt, internal or external, the purpose for which such a loan is incurred ; the terms and the methods of repayment, *etc.* Besides, the size of the national income, the nature of the tax system of the country, and also the distribution of the security holdings among the different classes in the society, should also be taken into consideration.

A public debt involves two kinds of burden, *viz.*, money burden and real burden, that is, the burden in terms of loss of economic welfare which the community suffers because of such a loan. These burdens, that is, the money burden and the real burden may, again, be direct and indirect.

**The Burden of an External Loan :** In the case of an external loan, the direct money burden is measured by the amount that has to be paid to the foreign creditors by way of interest and repayment of the principal. The direct real burden of such a loan is measured by the loss of economic welfare which these money payments involve. This burden, *i.e.*, the direct real burden or loss of economic welfare, however, will be less when the rich are made to contribute more towards the debt services than the poor.

The indirect burden which the payment of interest on such a loan and the repayment of the principal involve, is measured by the loss of the community arising from the check to its productive power which results from the larger export of goods in making these payments and also from the curtailment such payments entail in public expenditure in some more useful directions for increasing the community's welfare.

**The Burden of an Internal Loan :** In the case of an internal loan, since the payment of interest or repayment of the principal involves only a transfer of purchasing power from one section of the community to another, there is no direct money

burden for the community as such. Internal loans, however, involve considerable direct real burden. For, loans are given by those who are well off whereas taxes are paid by all and the transfer of wealth which repayment of these loans involves implies a transfer of wealth to those richer sections of the community. Such transfers, therefore, increase the inequality of incomes and the direct real burden will be more or less, according as such transfers of wealth increase or decrease such inequality of incomes among the people.

The indirect burden of the internal debts is measured by the effects of the taxes which are imposed in order to repay these debts upon people's willingness and ability to work and save. The community's ability to save increases since the money paid for loans is saved ; but since the taxes which are imposed affect the people's standard of living adversely, their ability to work and save is also affected adversely.

It cannot be denied that any debt, either external or internal, is likely to discourage productive activity in so far as it checks the tax-payer's ability and willingness to work and save and curtails the amount available for such public expenditures as are likely to stimulate production or increase the people's efficiency.

**Redemption of Public Debt :** The following are the usual methods of paying off a public debt.

**I. The Sinking Fund :** The sinking fund is a device which is usually adopted for paying off a public debt. Earlier, the practice was to provide for the accumulation of a fund by putting a certain amount of revenue annually into it during the life of the debt with a view to redeem the debt at the time of its maturity out of this fund. The fund was allowed to accumulate at a compound rate of interest.

This method of providing for the accumulation of the fund, however, did not prove very satisfactory. For, often fresh loans at higher rates of interest became necessary for setting



apart a certain sum for the building up of this fund. And, it only meant replacing the old debt by new ones. In fact, when new borrowings are necessary to feed a sinking fund, strictly speaking, it cannot be said to be a sinking fund, for, a sinking fund should be fed from taxes and not from fresh loans.

In modern times, however, the technique has changed. Now-a-days, the sinking fund simply means that certain funds are definitely set aside for debt redemption and every year these funds are used for paying off a certain portion of the principal of the loan instead of allowing the sinking fund to accumulate till it becomes sufficient for the redemption of the whole debt. This change has obvious advantages, *viz.*, the burden of the future interest payments becomes lighter and lighter as every year the amount of the loan is gradually reduced and more funds thus may be available for the redemption of the debt.

As a method of redemption of public debt the device of sinking fund is widely used and the method has no doubt certain advantages, *e.g.*, it ensures repayment of the debt at the proper time and helps maintenance of the national credit, etc. But there are certain difficulties, too. In the first place, a certain amount of cost has to be incurred for administering the sinking fund. Secondly, there is always the chance of misuse of this fund, *e.g.*, it may be used by the government for meeting the current expenses, etc.

**2. Conversion :** Conversion means just an exchange of new debts for old ones. Conversion, thus, is not repayment. It simply implies that in order to lessen the burden of a debt the government converts the existing debt into a new debt carrying a lower rate of interest and thus secures a reduction in interest charges. When a government decides to convert an old debt into a new one, it gives the creditors two alternatives, *viz.*, either to accept a new loan at a lower rate of interest, or, to accept repayment at par.

Conversion is said to be at par or at a discount or at a premium, according as it keeps the nominal amount of the debt the same, or results in an increase in the capital amount of the debt (increasing, thus, the ultimate liability of internal debts), or, results in a decrease in the amount of the principal.

Conversion is advantageous in so far as it secures a reduction in the burden of the interest charges of a public debt. But it should be remembered that such a reduction in the interest charges is possible only when the prevailing rate of interest is lower than the rate of interest which prevailed when the loan was floated ; and secondly, the state also should have the option or the privilege to repay the debt at any time. But such privilege is not always enjoyed by the state. Besides, a reduction in the amount of the interest charges does not mean a net saving. For, we have to take into account the loss of revenue resulting from a fall in the incomes of the creditors who will now be receiving less by way of interest and consequently, will pay less as taxes. The state thus would lose a certain amount of revenue.

**3. Capital Levy :** After the first World War, the method of imposition of a very heavy tax on the capital of the country, once or twice, known as capital levy, to repay huge war debts has been much discussed. The idea is to pay off a debt by the imposition of a levy on the accumulated capital of the country instead of spreading the repayment over a longer period of time.<sup>1</sup>

The assessment, under this scheme, is based upon the capital value of the wealth of an individual as distinguished from his income, that is, after exempting a certain minimum level from the levy heavy taxes are imposed once or twice on the accumulated wealth of the individuals. It can, however, never be used as a regular part of the fiscal system—it can be used only in emergencies.

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<sup>1</sup> When the levy is imposed on capital, it is known as a Capital Levy, otherwise, it is just a Special Levy.

Such a method of debt repayment has, of course, certain advantages. For instance, it is argued that during the war while the poor people, the working class, suffer and die, the capitalists amass wealth. Hence, it is justified that these people should be made to pay heavy taxes after the war, that is, should be made to suffer in wealth. In other words, this scheme will tend to correct the inequality of sacrifices made by different sections of the community during the war. This method also has the advantage that it necessitates payment for once or, twice and does not involve, as the sinking fund method does, the trouble of spreading the repayment of a debt over a longer period of time and hence, the people need not be taxed every year. It should also be noted that in the post-war period when the prices fall, the burden of the debt increases. The method of imposition of a capital levy will secure quick repayment of the debt and hence, will lessen this burden. Thirdly, the evil effects of taxation on productive activities will be reduced in so far as this method will secure reduction of future taxation.

These are no doubt great advantages of this method. Nevertheless, there are certain defects, too. In the first place, it is said that this method discriminates against those who have lived economically and saved and favours only those who have spent lavishly. Secondly, the imposition of a heavy tax like capital levy which is to be paid out of capital or savings will surely affect the future savings of the community adversely, that is, savings will be less in the future. There is, again, no guarantee that there will not be any repetition of the levy in future. Thirdly, there are certain practical difficulties, too. For instance, a professional man may earn a large income but may own no capital whereas another man with poor income may possess capital. What, then, should be the basis of assessment? Proper assessment of the trade assets or miscellaneous property also presents some real difficulties.

There is, however, no doubt that the imposition of such a levy has social justification in so far as the government, by such a levy, takes away a part of the wealth which the capitalists

amass during the war period and utilises it to redeem public debt or to reduce the post-war tax burden.

**4. Repudiation :** Repudiation of a debt by a government implies the refusal of the government to admit the validity of the debt obligations. It is, thus, a unilateral violation of the contract resorted to in order to get rid of the burden of the debt.

In the 19th century, several states of the American Commonwealth resorted to this step. In 1917, the Russian government also had to take resort to repudiation.

Repudiation, as a way of getting rid of a debt, has the obvious limitation that it would create difficulties for the government adopting this method in floating further loans in future. Repudiation of an external debt is likely to create greater difficulties since it may provoke military action by the creditor country, against the repudiating government.

The term repudiation obviously sounds provocative. Nowadays, therefore, the use of this term is avoided and the terms like, 'default', 'suspension of payments', 'transfer moratorium', etc., are used which imply a government's inability to pay or that the chance of payment is remote.

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## CHAPTER 42

### THE BUDGET

**What is a Budget ?** The national budget is a statement of accounts of revenues and expenditures of the nation for the year. It contains an account of the actual expenditure and revenue of the previous financial year and gives an estimate of expenditure of the coming year and also provides the 'ways and means' required ; that is, it includes the proposals for raising the revenue, *e.g.*, taxes, etc., to meet the estimated expenditure.

A budget is said to be balanced, if during the fiscal year, the revenue exceeds or, at least, does not fall short of, expenditure. It is said to be unbalanced, if the expenditure exceeds the revenue receipts. The budget is a surplus or a deficit one, according as the revenue receipts exceed or fall short of, expenditures.

**Should the Budget be balanced or unbalanced ?** According to the classical doctrine, if wages and prices are sufficiently flexible, then private enterprise will automatically employ all available factors of production. Hence, it follows that the state cannot increase the level of business activity and the 'precepts' which follow from the classical economic theory, which holds that private enterprise automatically maintains full employment, are : "1. Keep the budget small. 2. Keep the budget balanced. 3. Tax consumption, rather than saving. 4. If a deficit cannot be avoided, issue long-term bonds. 5. Borrow only for purposes of 'productive' investment. 6. Pay off the National Debt as fast as you can, by increasing tallaxes which impinge upon current consumption." <sup>1</sup>

But a balanced budget is no longer considered as a great virtue. The concept of functional finance has revolutionised the whole concept of sound public finance. An unbalanced budget,

<sup>1</sup> E. F. Schumacher—Public Finance—Its Relation to Full Employment. An article in *The Economics of Full Employment*, (Oxford University Institute of Statistics), pp. 87-8.

or, more plainly, a budget deficit, it is now agreed, is not always harmful and the public authority sometimes may be justified in incurring a budget deficit in the pursuit of larger aims, *e.g.*, carrying on a developmental programme, increasing the volume of employment, etc. The classical belief that a balanced budget is desirable in all circumstances was based on the assumption of "automatic full employment." But the moment we admit that the community's outlay may be inadequate to absorb all the productive resources and hence, insufficient to produce the maximum national income, we have to admit also that an increase of state expenditure beyond its revenue can increase the national income and hence, is beneficial. So long as there are unemployed resources, there will be no inflation and the deficit incurred for increasing the total spending with a view to securing full employment may be financed by printing money. Recourse may also be had to borrowing, either from the public or from the Central Bank, provided, of course, such borrowing does not deprive others of loans (and, thus, of the power of spending).

It is, however, true that the policy of deficit budgeting should be pursued with caution. For, there are certain dangers, too. For instance, it may lead to government extravagance, or, again, may retard private investment. Finally, the national debt should not be allowed to increase unduly, for, we should remember that the internal debt, in so far as it results in a transfer of purchasing power from the poor to the rich, has a real burden, too.

What, then, should be the accepted policy? In the long run, of course, the budget should be balanced, unless, as observes Dalton, "we are prepared to contemplate an increase, unlimited both in time and in amount, of the deadweight debt. And such a prospect is clearly intolerable, even if lenders were willing. But, in the short run, measured in terms of a year or two, the budget need not be balanced. This proposition is true in two different senses. First, an annual deficit or two

will not, of themselves, cause any great disaster. And, second, public policy may some times deliberately and legitimately incur temporary budget deficits in the pursuit of larger aims, notably an increase of employment through an expansion of credit.”<sup>1</sup>

The exchequer, however, should always remember that the merit of a budget lies in avoiding all wasteful expenditures and in, so distributing the taxation expenditure and borrowing, that it is possible for all income groups to share their burdens and benefits. He should also see that the advantages which it provides commensurate, directly or indirectly, with the cost which it is necessary to incur.

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<sup>1</sup> Dalton—Public Finance, (9th revised Edn.), pp. 304-5.

## ERRATA

<i>Page</i>	<i>Line</i>	<i>For</i>	<i>Read</i>
1	23	or	and
55	22	in	on
148	8	agreed •	agree
226	7	are	is
226	26	are	is
237	1	Increament	Increment
350	23	panick	panic
423	25	It	They

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